JOURNAL

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OCTOBER, 1959

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The Official Publication of the Podiatry-Chiropody Profession
Published under direction of the Board of Trustees

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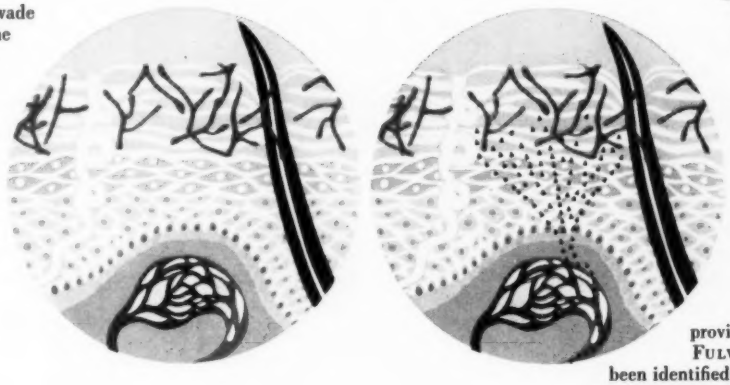

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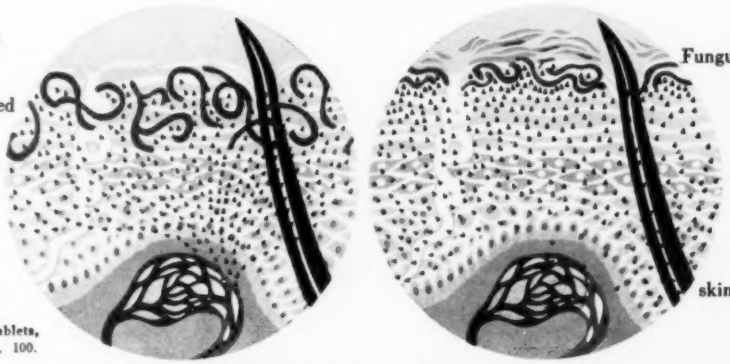

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The *Journal of the American Podiatry Association* is published monthly and copyrighted in 1959 by the American Podiatry Association.

Entered as second class matter at the P. O. at Boston, Mass., March 27, 1934, under the act of March 3, 1879, re-entered March 3, 1958. Publication office, 375 Broadway, Boston, and Editorial Executive offices, 3301 16th St., N.W., Washington 10, D. C.

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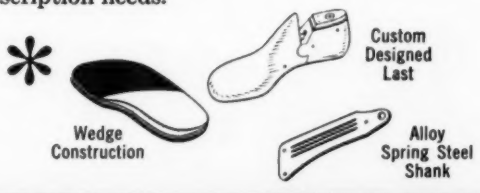

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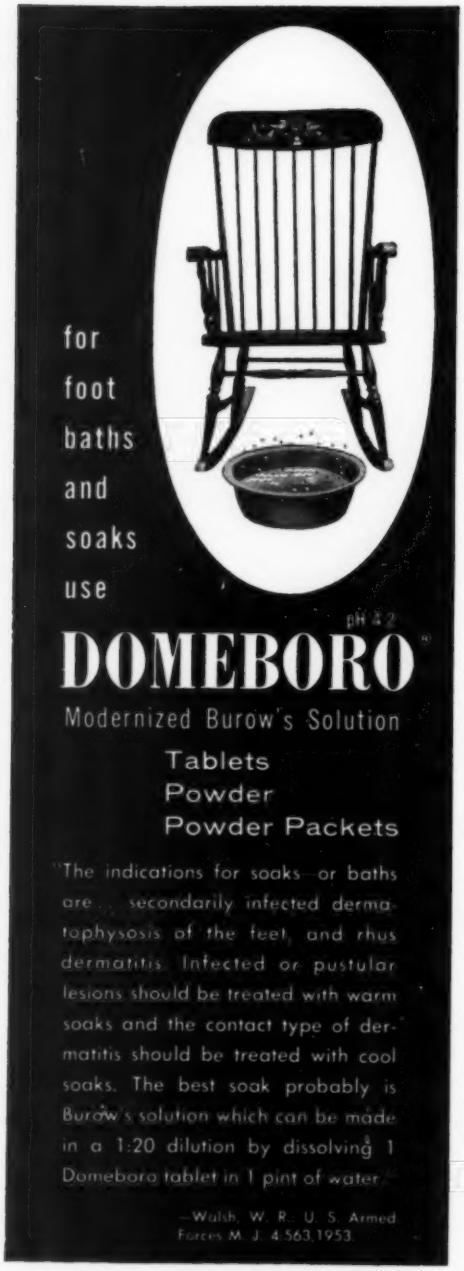
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STATE BOARD MEETINGS FOR EXAMINATION AND LICENSURE

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The Arizona State Board of Chiropody Examiners. **Board Secretary:** Dr. Julius Citron, 40 E. Thomas Rd., Phoenix, Arizona.

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Arkansas State Chiropody Examining Board. **Board Secretary:** Dr. Bernard S. Paul, 800 First National Bank Bldg., Fort Smith, Ark.

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The California Chiropody Examining Committee will meet for examination in Sacramento, October 19-22, 1959. **Board Chairman:** Abraham Hoffman, D.S.C., 2320 Sutter St., San Francisco, Calif. **Executive Secretary:** Mr. Wallace Thompson, Rm. 530, 1020 N St., Sacramento, Calif.

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Florida

The Florida State Board of Chiropody Examiners. **Board Secretary:** Dr. Heywood A. Dowling, 203 Greenleaf Bldg., Jacksonville, Fla.

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The Idaho State Board of Chiropody-Podiatry. **Board Secretary:** Dr. J. E. Franden, 412 Eastman Bldg., Boise, Idaho.

Illinois

The Illinois Chiropody Examining Committee will meet for reciprocity and examination in June 1960 at 160 No. LaSalle St., Chicago, Ill. **Superintendent of Registration:** Frederick B. Selcke, Room 109, State House, Springfield, Ill.

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Louisiana State Board of Medical Examiners will meet for reciprocity and examination, Dec. 1959, in New Orleans, La. **Board Secretary:** Donald Zichichi, D.S.C., 1011 Pere Marquette Bldg., New Orleans 12, La.

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The next board meeting of the Board of Registration in Chiropody-Podiatry will be held for reciprocity, conditionally, and examination, June and December, at the State House, Boston, Mass. **Board Secretary:** Dr. Fred T. Reiss, Ritz Carlton Hotel, Boston, Mass.

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The Michigan State Board of Registration in Chiropody will meet for examination in June of each year. **Board Secretary:** Dr. Walter J. Jeffery, 1950 Madison Ave., S.E., Grand Rapids, Michigan.

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Ohio
The Ohio State Medical Board will meet for examination Dec. 15, 1959, at 21 W. Broad St., Columbus, Ohio. **Examiner in Chiropody:** H. M. Platter, M.D., 21 W. Broad St., Columbus, Ohio.

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The South Dakota State Board of Chiropody Examiners will meet at the discretion of the Board. **Board Secretary:** Dr. Fred D. Rule, 204 Kresge Bldg., Sioux Falls, S. D.

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The Wisconsin State Board of Examiners. **Board Secretary:** O. J. Trimborn, D.S.C., 208 E. Wisconsin Ave., Milwaukee 2, Wis.

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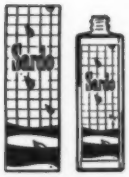

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1. Prentice, H., and Bresak, S.: Jrnl. Amer. Podiatry Assn., May 1958. 2. Spoor, H. J.: N. Y. State J. Med., Oct. 15, 1958.

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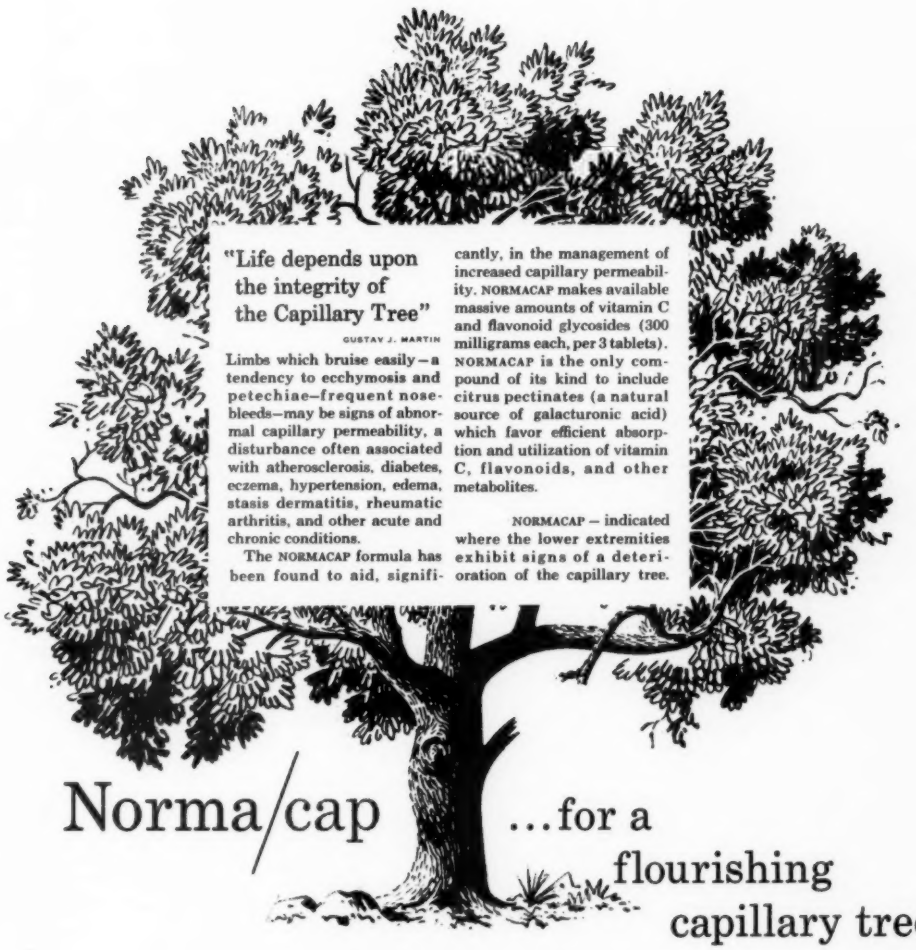

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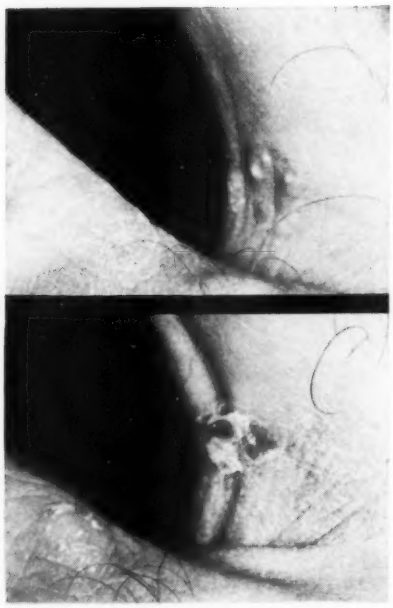

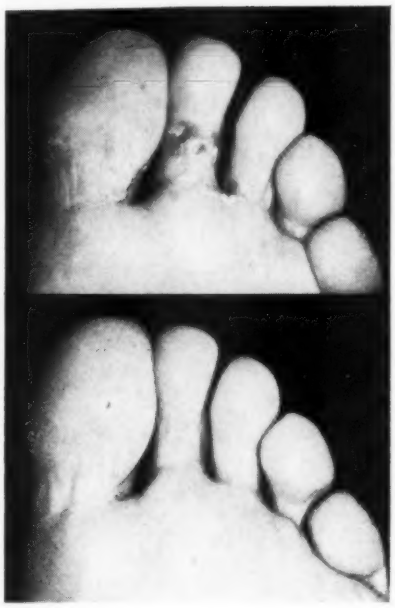

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THE OFFICIAL PUBLICATION OF THE PODIATRY-CHIROPODY PROFESSION

VOLUME 49 OCTOBER, 1959 NUMBER 10

LABORATORY RE-EVALUATION OF FUNGUS GROWTHS IN SHOES, SOCKS AND SKIN*†

H. C. GOLDBERG, M.D.‡
Plainfield, N. J.

THE purpose of this research is to re-evaluate growth of fungi in the shoes and socks and to correlate this with fungus infections of the feet. Fresh laboratory data using improved and more accurate techniques have been employed to accomplish this.

The general impression of many dermatologists is that the presence of fungi in footgear is minimal, further that when it is present it is of little importance in causing fungus infections of the feet.[1] Baer[2, 3] supported this view by applying pathogenic fungus organisms to normal feet and showing that no clinical infections developed, although organisms could be isolated from the feet of one-half of these patients for a number of weeks. On the other side of this picture Hirschberg[4] states that 95 per cent of the shoes of the foot patients treated at two podiatry clinics contained spores of fungi, chiefly M. albicans, T. gypseum, Aspergillus and T. purpureum.

He further states[5] that 72 per cent of these patients with clinical symptoms of tinea pedis showed on re-examination marked or complete recovery when their footgear was fumigated. An even more remarkable statement used supporting his claim is data[6] showing that some patients with fungus infections of the toes and of the nails were cured within one week when the shoes were fumigated. It is obvious that wide discrepancies occur among these statements.

How variable laboratory data can be, and how important proper interpretation of laboratory data must be, is recognized in a recent article on "The Absence of a Fungistatic Effect of Squalene on Dermatophytes." Here it is stated that "Sobel was unable to duplicate his original results using his paper disc technic with *our* strains." (Mihay, B & Zackheim, H.S.) In addition, tradition gives unwarranted weight to the conclusions derived from old articles.[7]

Some of these go back 21 years and more and describe experimental methods and laboratory materials that are now outmoded or no longer even existent because of better investigational tools and im-

*This investigation supported in part by grant from W. F. Young Co.

†Award winning paper submitted in the William J. Stickel Annual Awards for Research in Podiatry-Chiropody for 1959. Presented at the Annual Meeting of the A.P.A., Waldorf-Astoria Hotel, New York, N. Y., August 1959.

‡Diplomate of American Board of Dermatology.

TABLE I

Shoes of Twenty-five Patients with Clinically Normal Feet Examined for Fungi
3 Patients (22%) Had Positive Mycological Findings on the Skin.
No Patient Showed Any Mycological Findings on the Shoes.

#	Patient	Skin		Nail		Socks		Shoe	
		Microscopic Exam.	Culture	Microscopic Exam.	Culture	Microscopic Exam.	Culture	Microscopic Exam.	Culture
1	KRA	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
2	CAE	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
3	DOW	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
4	MEN	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
5	VIG	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
6	PAR	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
7	JRH	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
8	GRU	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
9	HAC	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
10	ORG	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
11	YAN	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
12	BAN	Positive	Positive	Neg.	Neg.	Positive (Skin Scales Only)	Positive	Neg.	Neg.
13	LUC	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
14	DIG	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
15	MAR	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
16	WIL	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
17	ODO	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
18	PIC	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
19	SAN	Positive	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
20	YOU	Neg.	Neg.	Positive	Neg.	Neg.	Neg.	Neg.	Neg.
21	REN	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
22	FAL	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
23	RUT	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
24	BRN	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
25	NEL	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.

proved technicological manufacturing technics.

In order to re-evaluate these conflicting opinions, the following laboratory projects were planned and carried out. Firstly, twenty-five patients whose feet appeared normal clinically were tested for evidence of fungus infection. Out of this group twenty-two (78 per cent) were found free of any evidence of fungus infection. This laboratory test was done by the direct microscopic examination of skin and nail scrapings, and also by culture inoculation on Sabouraud's (mycosel) agar incubated at 25°C (77°F). These results compare reasonably well with other surveys.[8, 9] The shoes of these clinically normal and laboratory negative patients were then examined for the presence of fungi. This is shown in Table I, to be completely absent.

It needs to be noted in passing that where fungus organisms may be found present on the feet, it does not presuppose that ipso facto they are causing disease. They can live simply as well adjusted parasites on the skin in the same way that some patients carry typhoid germs and yet do not have this disease, typhoid fever.[10]

Secondly, fifty patients with a tentative diagnosis of fungus disease were examined for mycological evidence of disease. Of these thirty-eight (76 per cent) were found to actually have fungal elements present on the skin. These were found by the double laboratory test for fungi. A direct microscopic examination of skin scrapings was done with 10 per cent potassium hydroxide solution and 10 per cent Parker's superchrome ink. Culture inoculations were watched for the positive growth of fungi, further identified as pathogens.

A correct diagnosis of dermatophytosis may often be made clinically. However, the double laboratory test for fungi shows that an incorrect diagnosis of a fungus infection is often too easily made.

TABLE II

Material Obtained from Footgear of 38 Patients (76 Pairs of Shoes and Socks)
With Laboratory Proven Fungus Disease of the Feet.
(Selected from 50 Patients with a Clinical Diagnosis of Dermatophytosis)

	Brushed out of sock	Brushed out of shoe	Burred out of shoe
Skin Scales	12 patients	9 patients	2 patients
Microscopic	6 pos. 6 neg.	3 pos. 6 neg.	2 pos.
Culture	3 T. Rubrum	1 T. Mentagrophytes	T. Rubrum
	1 T. Mentagrophytes	8 Neg.	1 Neg.
	8 Neg.		
Débris		1	38
Microscopic		1 Pos.	1 Pos.
Culture		1 T. Rubrum	1 T. Mentagrophytes

The skin specimens for the culture inoculations were placed on Sabouraud's (mycosel) agar in petri dishes and kept at 25°C (77°F) for one month under observation for the growth of fungi. The cultures which grew out were identified with comparison plates or by culture mounts grown on special diagnostic media, and examined microscopically for cultural characteristics.[11]

The entire shoe, except for the roof at the site of the pressure groove of the big toe, was brushed out onto a 12″x12″ sheet of paper. The debris collected was examined by the double laboratory test for fungi.

A special effort was made in the direct microscopic examination to identify and differentiate fungal elements which are found in skin scales and those found in shoe components. A curet was used to scrape the pressure groove in the roof of the big toe. The debris collected was examined by the double laboratory test. A metal burr in a motor driven hand tool was used to scrape material from the cloth lining, the inner sole and the heel rest of the shoe. This material was also examined by the double laboratory test. The collective results of all these tests is shown in Table II. The sums of these individual tests show that 6 (15.7 per cent) of this group of footgear (shoes and socks) from laboratory proven infected feet, had fungal elements present in them. The different percentiles in the location of the different shoe areas was not significant. Fungal elements found in the shoes alone amounted to 4 or 10.5 per cent of the patients examined. The reason for this latter difference is readily accounted for by the fungistatic effect of the various chemicals used in processing shoe components, in assembling these parts, and in the preservatives applied to them.[12]

These figures are between those of excellent authorities who have found zero per cent of fungal elements in shoes[13] and 15 per cent of fungal elements in shoes.[14]

It is important to know to what extent fungus organisms are present in footgear. A third group of laboratory experiments was set up to double-check this. New wool, cotton and nylon socks were washed to remove the sizing and other materials on these new socks. They were then inocu-

TABLE III

GROWTH AFTER INOCULATION OF SOCK AND SHOE COMPONENTS WITH FUNGI AFTER 4 WEEKS

Materials	Organisms															
	T. Mentagrophytes				E. Flocossum				T. Rubrum				C. Albicans			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	weeks				weeks				weeks				weeks			
1. Wool sock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2. Cotton sock	0	0	0	0	0	0	0	0	0	0	$*_1$	$*_1$	0	0	0	0
3. Nylon sock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4. New shoe leather	0	0	0	0	0	$*_2$	$*_2$	$*_2$	0	0	0	0	0	0	0	0
5. Worn shoe leather	0	$*_1$	$*_1$	$*_1$	0	$*_2$	$*_2$	$*_2$	0	0	$*_1$	$*_1$	0	0	0	0
6. New innersole	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7. Worn innersole	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8. New heel rest	$*_2$	$*_2$	$*_2$	$*_2$	0	0	0	0	0	0	0	0	0	0	0	0
9. Worn heel rest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10. Leather Dust (from repair machinery)	0	0	0	0	0	0	0	0	$*_1$	$*_1$	$*_1$	$*_1$	0	0	0	0
11. Worn man's glove	$*_4$	$*_4$	$*_4$	$*_4$	$*_2$	$*_2$	$*_2$	$*_2$	$*_2$	$*_2$	$*_2$	$*_2$	0	0	0	0
12. Worn woman's glove	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13. Wood shank	0	0	0	0	$*_1$	$*_1$	$*_1$	$*_1$	0	0	0	0	0	0	0	0
14. Used cloth lining	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15. Used box toe material	$*_2$	$*_2$	$*_2$	$*_2$	$*_2$	$*_2$	$*_2$	$*_2$	$*_2$	$*_2$	$*_2$	$*_2$	0	0	0	0
16. Control growth on Sabourand's	+	+++	++++	++++	+	+++	++++	++++	++	+++	+++	+++	+++	++++	++++	++++

*Incidental contaminants 1. Aspergillis 2. Penicillin 3. Rhizopus 4. Mucor

lated with the four common pathogenic fungi which cause infections of the feet. Unclaimed shoes from a shoe repair store were broken apart and the components used for inoculation with these fungi, and other pertinent materials were also used. Thus, new leather, accumulated leather dust from repair machines, wooden shanks, box toe material, cloth lining, inner soles, heel rests, leather from a man's and woman's gloves were also inoculated with the fungi after abrading the surface of these materials. The method used to grow the pathogenic organisms on these materials was as follows. The selected material was placed on a sterile glass slide elevated on glass blocks in a sterile petri dish. Sterile water was added to cover the bottom of the petri dish to produce a high humidity inside the dish. The results of this third group of tests is summarized in Table III. They clearly show the fungistatic qualities of shoe components. No growths occurred on the socks, and negligible growth developed on the other material tested. This shows that even under optimal growth conditions namely 25°C (77°F) and high humidity, these materials do not readily support the growth of such organisms. Conflicting laboratory data to this was presented by Fulton & Mitchell.[15] Their experiments were carried out at 98.6°F (37°C) and were different in other ways than those presented here.

Conclusion

Three sets of experiments were conducted utilizing simple well-established laboratory check methods. The first set of experiments showed that clinically well feet seldom harbor pathogenic fungi and the shoes of these patients have little or no fungal elements. The second set of experiments showed that only a small per-

centage (15.7 per cent) of the footgear of patients with proven fungus disease carry fungus organisms. The third set of experiments showed that socks do not favor the growth of fungi, and that shoe components tend to be fungistatic as a result of the processing in the manufacturing of shoes.

Summary

This data and the articles cited suggest therapeutic improvements in our present day treatment of fungus disease. These are based on factual information concerning the growth of fungi in shoes, socks and skin derived from fresh and cross-checked laboratory tests. Good hygiene indicates that shoes be kept clean inside as well as out. Socks should be turned inside out twice when laundered to remove a maximal amount of skin scales. Immunity accounts for host resistance to fungus as well as other infections. Improvements in this field must be sought to solve fungus problems. A new oral fungal antibiotic is proving successful and more help may be expected from systemic and topical medications.

7 Watchung Ave.

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HOZENE*: AN ANTIFUNGAL DETERGENT FOR HOSIERY

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Fungus infections of man, while always a problem, have never received the concentrated attention of researchers and clinicians that the bacterial and viral infections have. This is partly due to the relative lack of definitive diagnostic procedures for many fungus infections as well as to the fact that a large proportion of fungus infections are superficial and therefore more of an annoyance than an actual threat to the life of the patient. Tinea pedis or athlete's foot is a good example of the latter situation. Many of the treatments used in the present day for athlete's foot have been used for decades, e.g. ointments containing a keratolytic agent such as salicylic acid and an antifungal agent such as sulfur or fatty acids[1]. Very recently, the antibiotic griseofulvin was introduced as an oral treat-

*Hozene® is a trademark of W. F. Young, Inc, Springfield, Massachusetts.

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ment for the dermatophytes and has yielded highly encouraging results[2].

While the treatment of athlete's foot must primarily involve an attack on the fungi responsible for the infection, clinicians have always realized that more than passing attention must be given to measures that would prevent spread of the infection to others in the household of the patient as well as reinfection of the patient himself[3, 4]. Some authors have stated that as a practical matter in the treatment of ringworm of the feet, shoes and stockings must be treated so as to destroy the fungi therein contained[5] while others have suggested that shoes and stockings be either disinfected or discarded.[6] There have been various studies carried out with the purpose of assessing the degree to which contaminated footwear is responsible for reinfection of patients. Jameson and McCrea[7] from their results concluded that footwear does harbor pathogenic fungi and may be a source of reinfection. Hirschberg[8] quotes studies carried out at the New York College of Podiatry and Temple University School of Chiropody in which it was found that 95% of the patients' shoes tested contained spores of pathogenic fungi. He cited another study which showed that fungi remain viable in stockings after laundering. Other dermatologists have stated that although pathogenic fungi may persist in footwear, their presence does not necessarily mean that a clinical infection will result. Goldberg[11] has presented experimental evidence to the effect that clinically well feet seldom harbor pathogenic fungi and that 15.7% of patients with proven fungus disease have footgear contaminated with fungi. Finally, Howell[12] stated that in onychomycosis, recurrence is more likely to result from re-infection than from insufficient treatment.

While these various statements are somewhat in conflict, there does seem to be some agreement as to the following: (1) Footwear definitely can harbor pathogenic fungi, and thus could serve as a source of infection for susceptible persons; (2) the percentage of patients with footwear contaminated with pathogenic fungi may be considerable. It is to this problem of contaminated footwear that only recently has attention been focused. As long ago as 1940, Seldowitz[12] reported on medicated insoles in the treatment of dermatophytosis pedis. Ormsby and Montgomery[4] suggested swabbing the inside of the shoe with a formaldehyde solution. Hirschberg[8] described a product consisting of a tablet which releases a fungicidal gas and which can be placed in a plastic bag together with the shoes and socks, thus disinfecting the latter. More recently, a product has been developed which permits the patient to swab the inside of the shoe with an antifungal preparation[13]. The present report, however, is concerned with an antifungal detergent preparation that has been devised for sanitizing the patient's contaminated socks. This product known as Hozene®, contains in addition to a detergent, a germicide known as para-chloro-meta-xylenol. Para-chloro-meta-xylenol, which is also known as PCMX, or Di-Clo-Phene, is a halogenated phenol derivative with the structure shown in Figure 1.

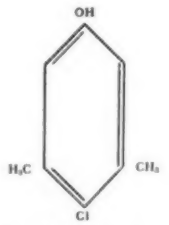

Fig. 1. The chemical structure of para-chloro-meta-xylenol (PCMX)

PCMX was first patented in Germany in 1927 and has been widely used in Germany and England for a couple of decades. It is official in the British Pharmacopoeia but only in recent years has it become avail-

†PCMX is available in the U. S. A. from the Ottawa Chemical Co., Toledo, Ohio.

able for use in this country.† PCMX has many remarkable properties as a germicide. In addition to chemical stability, it is amazingly non-toxic to lower animals and man[14, 15, 16], yet it exerts its germicidal activity against a wide spectrum of micro organisms including bacteria, fungi, yeasts and pathogenic protozoa. Phenol coefficients of 38 in aqueous solutions and 62 in soap solutions have been reported for this germicide[17]. PCMX is much less inhibited by organic matter than many other germicides[18] and has been used in scores of formulations such as Liquor Chloroxylenolis, official in the British Pharmacopoeia, as a preservative for vaccines[19] and ophthalmic solutions[20], as a leather preservative[21], to impart antiseptic properties to plastics, in dusting powders, hand lotions, skin creams, shampoos, and various liquid and solid formulations, either solely as a germicide or as a part of a germicidal detergent[22]. Because of the low solubility of PCMX in water, a soap or surface-active agent must be used in the formulation to solubilize the PCMX.

PCMX is active against both gram negative and gram positive bacteria[18]. There are many reports in the literature regarding the usefulness and effectiveness of PCMX preparations in the treatment of wounds[23], to effect antisepsis in obstetrical practice[24], treatment of urinary infections[15] and skin antisepsis[15].

These remarkable properties of PCMX in addition to data that PCMX is fungistatic and fungicidal for *Trichophyton interdigitale* and *Trichophyton rubrum*[18, 22], fungi often involved in athlete's foot, made it appear promising as the active ingredient of an antifungal detergent for hosiery.

Methods and Materials

The product tested had the following composition:

Para-chloro-meta-xylenol	2.0%
Sodium dodecyl benzene sulfonate	18.6%
Inert ingredients (phosphates, mild alkalis, foam stabilizers, etc.)	79.4%

The test organisms employed were *Trichophyton mentagrophytes (interdigitale)* strain 640 ATCC 9533 and *Micrococcus pyogenes* var. *aureus* ATCC 6538. The former is the test organism used in the Official Fungicidal Test of the Department of Agriculture and is a typical dermatophyte. The strain of staphylococcus used is the standard strain of the F.D.A. and the Department of Agriculture. The medium used for maintaining and culturing the *T. interdigitale* contained 1% of Difco Neopeptone and 2% of dextrose. The pH was adjusted to 6.1-6.3. For producing a solid medium, 2% Bacto-agar was added. Suspensions of spores of *T. interdigitale* were prepared according to the directions in the A.O.A.C. Manual, 8th Edition. *M. pyogenes* var. *aureus* was cultured on nutrient broth containing 1% Armour's Peptone, 0.5% Difco Beef Extract and 0.5% sodium chloride. The pH was adjusted to 6.8. Nutrient agar had the above composition plus 2% agar.

Fungistatic properties were determined by placing solutions to be tested in stainless steel cylinders on the surface of medium seeded with spores of *T. interdigitale*. A zone of inhibition of growth of the fungus around the cylinder resulted if the solution was fungistatic. The Modified Cade and Halvorson method[25] was used for determining sanitizing properties, both against *M. pyogenes* var. *aureus* and *T. interdigitale*. Antifungal action of Hozene against sock material contaminated with *T. interdigitale* was performed as follows: swatches of white cotton sock material, approximately 2 cm. by 2 cm. were cut out, sterilized by autoclaving and soaked in a spore suspension of *T. interdigitale* containing between 10,000,000 and 20,000,000 spores per ml. The swatches were placed on filter paper to drain off excess liquid. Each of the contaminated swatches was placed in either a solution of Hozene or

in distilled water at the same temperature as the Hozene solution. After the proper time interval, the swatches were removed, rinsed in distilled water, placed on filter paper to remove excess water and placed in 30 ml. of medium for incubation at 25°C for seven days. The amount of fungus growth resulting was taken as an indication of the amount of survivors.

Results

Fungistatic Properties of Hozene: The results are given in Table I. In a concentration of 1.065 gm. of Hozene per 100 ml. of distilled water, Hozene was decidedly fungistatic.

TABLE I

Fungistatic properties of Hozene. The test organism was *T. interdigitale.*

Concentration of Hozene (gm. per 100 ml. of distilled water)	Size of zone of inhibition (mm)
0.355	0
0.71	0.5
1.065	1.5

Sanitizing Properties of Hozene:

(a) Against *M. pyogenes* var. *aureus:* The Hozene solutions were kept at 50°C and sampling times of 30 seconds, 2 minutes and 5 minutes were used. The results are given in Table II.

TABLE II

Sanitizing properties of Hozene against *M. pyogenes* var. *aureus.* Hozene solution temperature: 50°C.

Concentration of Hozene	*Sampling time*	*Total Colonies per plate 30 sec.*	*2 min.*	*5 min.*
0.355 gm/100 ml. water		12	11	8
0.71 gm/100 ml. water		6	2	1
1.065 gm/100 ml. water		1	1	0
Control (0.1% sodium tetraphosphate)		8,077	6,550	6,805

(b) Against *T. interdigitale:* The results are given in Table III. The procedure was essentially the same as that used in the case of *M. pyogenes* var. *aureus* with the exception of the control which was distilled water. In addition, the results are expressed as live spores per ml. of Hozene test solution or control instead of as in the Modified Cade and Halvorson Method.

TABLE III

Sanitizing properties of Hozene against *T. interdigitale* at 50°C.

Concentration of Hozene / *Sampling time*	*Live spores per ml. 5 min.*	*15 min.*	*Percent reduction (in 15 min.)*
0.355 gm/100 ml.	53,000	14,500	96.2
0.71 gm/100 ml.	21,500	4,800	98.75
1.065 gm/100 ml.	3,800	270	99.93
Control	378,000	378,000	0

Antifungal Effects on Contaminated Sock Swatches: This testing procedure was designed to evaluate, so far as possible, the effectiveness of Hozene for complete sterilization of socks artificially contaminated with a very large dose of *T. interdigitale* spores. Typical results are shown in Table IV.

TABLE IV

Antifungal effects of Hozene on sock swatches contaminated with *T. interdigitale* spores. Hozene solution was in concentration of 1.065 gm/100 ml. of distilled water.

Temperature of Hozene solution	*Time of Exposure*	*Fungal growth in culture of swatch*
50°C	Control (dist. water)	++++
	2 minutes	++
	5 minutes	++
	15 minutes	+
60°C	Control (dist. water)	++
	2 minutes	—
	5 minutes	—

Discussion

The results presented above indicate that Hozene in a concentration of 1.065 gm. per 100 ml. of water has a decided sanitizing effect on *M. pyogenes* var. *aureus* and *T. interdigitale* at 50°C. The data obtained in these experiments coupled with the data in the sanitizing experiments indicate that the fungal spore count is markedly reduced. Complete killing of fungi is obtained at 60°C.

M. pyogenes var. *aureus* was included in this study because it is always a problem as a secondary invader in cases of Tinea pedis and an ideal preparation useful as an

antifungal detergent should also be capable of killing staphylococci. Hozene represents a definite forward step in the treatment of the whole problem of dermatophytosis pedis.

Summary and Conclusions

Hozene, an antifungal detergent in a concentration of 1.065 gm. per 100 ml. of water, at 50°C, was shown to be capable of reducing the spore count of *T. interdigitale* by 99.9% in 15 minutes and completely destroying *M. pyogenes* var. *aureus* in 5 minutes. At this concentration and temperature, it did not completely sterilize cotton sock swatches contaminated with *T. interdigitale* spores in 15 minutes but did completely sterilize at 60°C in 2 minutes.

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"Life is a roar of battle and bargain, but in the very heart of it there rises a mystic, spiritual tone that gives meaning to the whole and transmutes the dull details into romance."

Oliver Wendell Holmes

TRICOLOBISONIUM CHLORIDE IN SECONDARY INFECTIONS OF THE LOWER EXTREMITIES IN AMBULATORY PATIENTS*

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TREATMENT of chronic infections of the skin can produce difficult iatrogenic problems. While most infections heal in a short time, the drug employed, usually an antibiotic or sulfa ointment, can cause secondary allergic manifestations.[1-3] Skin sensitivity to antibiotic ointment is very common.[2] When chronic ulcerations need to be treated for long periods of time, thought should be given to using drugs with a low index of undesirable reactions.

The use of systemic antibacterial agents in place of topical applications carries the risk of sensitization of the patient to the drug creating serious difficulties when it becomes necessary, sometime later, to use that drug for more morbid systemic infections. The advantages of an antibacterial agent that cannot be used systemically are, are, therefore, self-evident.[2, 4]

A clinical evaluation by Edelson[5] of tricolobisonium chloride,** a new antibacterial, revealed a low incidence of side reactions. Similar results were reported by Robinson[6] in the treatment of superficial skin infections by this agent.

Tricolobisonium chloride is a new synthesized bis-quaternary diamine derived from beta-ionose. Animal studies showed that it has high bacteriostatic and mild bactericidal activity against both gram positive and negative organisms,[7] especially penicillin resistant staphylococci.

Based on these reports of low incidence of secondary skin irritation and sensitization, as well as its activity against all

Fig. 1. 80-year-old male. Arterio-sclerotic ulcer of one year duration. Previous treatment with a variety of ointments proved unsuccessful. Tri-colobisonium chloride ointment was initiated on March 7th and the patient was discharged on April 22, 1959.

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*Presented at the Annual Meeting of the American Podiatry Association, August 1959.

**Triburon—Hoffman-La Roche Inc., registered trade name for tricolobisonium chloride.

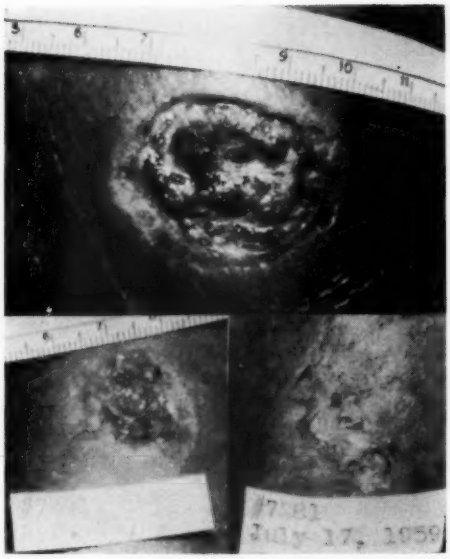

Fig. 2. 66-year-old female. Diabetic, arterio-sclerotic ulcer of four months duration. Ulcer on left heel four years ago did not heal until patient was hospitalized for six months. In present case, the patient was first seen January 13, 1959 and antibiotic ointment gave no result. Tricolobisonium chloride ointment started on February 28th and the patient was discharged July 17, 1959. During treatment with tricolobisonium chloride, the patient remained ambulatory and did not experience burning and itching as with previous medications.

strains of staphylococci, including those penicillin-resistant, it was decided to test a series of patients with infections that are commonly seen in the lower extremity.

In the current study we undertook to determine first the possible sensitization to the drug. Tricolobisonium chloride 0.1 per cent in a water miscible base with hydrocortisone 0.5 per cent was used as a dressing after the reduction of skin excrescences and for packing in nail grooves. A total of 3,684 dressings were applied to 1,119 patients without any evidence of sensitization.

This type of testing, however, is not a true indication of the allergy-producing properties of any drug. Edelson,[5] using the multiple closed patch technique developed by Draize of the Food and Drug Administration, tested tricolobisonium chloride in a 0.1 per cent concentration (the therapeutic concentration) in both a carbowax and a vanishing cream base. Closed patches of a half gram of the ointment were applied to each of 220 subjects. As a control, similar patches of each base were also applied. All three patches were applied in systematic fashion to the forearms and arms and allowed to remain for 24 hours, after which time they were removed and the reading recorded. Ten such applications were done at 48-hour intervals and a rest period of 14 days was given. A challenging test was then applied and the results recorded at 48 and 72 hours.

The tests, including a total of 4,598 patches, were performed on 209 subjects. Only 4 subjects (less than 2 per cent) exhibited mild allergic reactions in response to the final insult test patch in Edelson's study. No patient exhibited clinical allergy and there was no instance of primary irritation.

Robinson[6] found that tricolobisonium chloride was effective in 56 of 58 patients with impetigo and 35 of 40 patients with ecthymas. Twenty-four of 29 patients with secondarily infected eczematous eruptions who were treated with tricolobisonium chloride plus 0.5 per cent hydrocortisone, responded well.

In our study we used the tricolobisonium chloride 0.1 per cent in a water miscible base. The ointment was applied to two-by-two gauze packs and autoclaved for 20 minutes at 15 pounds pressure. The ointment-impregnated packs, which more than completely covered the infected areas, facilitated the application of the drug. Because ointment-impregnated packs were used, at no time was there any danger of occluding the wound and preventing drainage.

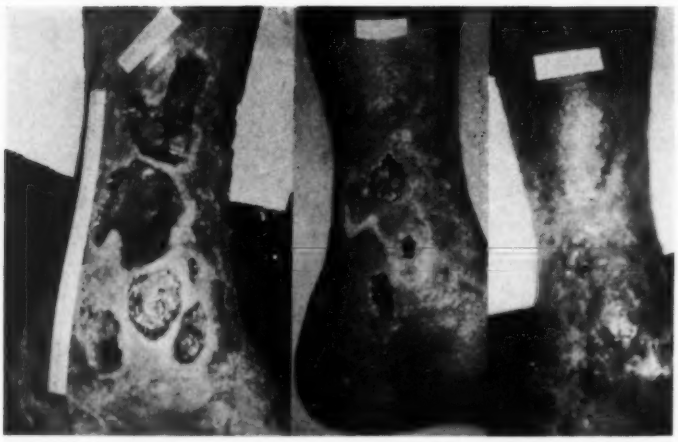

Fig. 3. 56-year-old male. Varicose ulcers (both legs) of 15 years duration. Patient first seen November 13, 1958; antibiotic ointment proved unsuccessful. Treatment by tricolobisonium chloride ointment initiated March 10th and patient discharged July 17, 1959.

One hundred and eighty-seven patients, all but one of whom were ambulatory, were treated for infections or secondarily involved infections of the lower extremity.

The group consisted of 101 males and 86 females, whose ages ranged from 11 months to 87 years. Duration of treatment was from 3 days to 15 weeks.

During the course of therapy other modalities were used in conjunction with the tricolobisonium chloride.

Unna paste boots*† were applied for leg stasis ulcers; physiotherapy such as whirlpool or ultraviolet was used when indicated; necessary debridement was done; trimeprazine*‡ was administered when itching was evident; tranquilizers were given to apprehensive patients, etc. In patients with a lymphangitis concurrent with the local infection, sulfadimethoxine, a systemic antibacterial, was used until the condition cleared up.

Clinical results were classified as *cured* when the infection was brought under control without evidence of interference with healing and without side reactions; *improved*, when the healing was satisfactory but slower than what was considered normal; *poor*, when there was no sign of the infection clearing or if there were any manifestations of undesirable side reactions.

It was noted that both odor and drainage were lessened as healing progressed. In all the ulcer and burn cases the advance of the epithelial border was quite evident. The following four cases are illustrative of the efficacy of this drug.

Tricolobisonium chloride was used in the treatment of 12 patients with tinea pedis and 4 patients with psoriasis. These patients were exposed to this therapy only for a period of from 2 to 6 weeks. In only 3 of the tinea patients was there any improvement due to the drug. When 0.5 per cent hydrocortisone was added to the tricolobisonium chloride, 2 more of the tinea patients and all 4 of the psoriasis patients showed some improvement.

The results of therapy are summarized in Table I.

Conclusion

Tricolobisonium chloride, a new antibacterial, has been found to be an effective, safe and non-sensitizing topical preparation in the treatment of bacterial infections of the skin.

It has not proven to be of equal value in psoriasis or tinea pedis.

There was no evidence of toxicity or sensitization in any of the patients treated.

Judged by clinical criteria, the healing was as rapid as it possibly could be for

*†Primer Bandage — The Dalzo-registered trade name for its Unna Paste Boot.
*‡Temaril—The Smith Kline & French registered trade name for trimeprazine.

TABLE I
DIAGNOSTIC CATEGORIES AND RESULTS OF TREATMENT

Diagnosis	Male	Female	Cured	Improved	Unimproved	Comments
Chronic stasis ulcers						
Varicose	12	29	36	4	1	burning 3, itching 1
Diabetic	13	6	14	3	2	diabetes was not under control in 2 unimproved, itching 1
Arteriosclerotic	2	1	1	1	1	
Acute stasis ulcers						
Varicose	2	4	6			
Diabetic	2	2	4			
Nails						
Paronychia	26	11	37			
Onychia	7	9	16			
Fungus	9	3	9	2	1	burning 1, itching 2
Burns						
Sun	1		1			
Gasoline	1		1			
Fat		1	1			
Water		1	1			
Starch		1	1			
Heloma						
Home "drug" treatment	2	6	8			itching 1
"Bathroom surgery"	1	1	2			
Bursae		2	2			
Pyodermas	5	1	6			
Fungus	12	4	16			itching 2
Psoriasis		1	1			
Wounds and/or lacerations	3		3			
Post-operative wound	1		1			
Eczematoid dermatitis*	2	1	3			
Neurodermatitis*		2	2			itching 1
Total	101	86	172	10	5	

*0.5 hydrocortisone added

the primary and secondary lesions seen in each of these cases. A comparison study with other ointments used in a parallel group of patients would provide a more definitive conclusion concerning the drug's relative position in this respect. However, the fact that these infections, which were superimposed on pre-existing or systemically produced lesions, cleared up without any side effects is an indication that the primary lesions healed well within the normal length of time.

The authors acknowledge the assistance of Doctors E. Bier, M. Bromberg, S. Goldstein, E. Mickiewitz, O. Scheimer and R. Stess for allowing us to use their case reports in the gathering of this information.

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FOOT INSPECTION OF THE SCHOOL CHILD*

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A WRITER-PHILOSOPHER like Jourbet, or a student of the classics would, I am sure, title his paper with this admonition

"In bringing up a child
think of its old age."

And how apt this is. For in the recent past there have been a number of statistical reports confirming what was in the minds of many podiatrists; most of the foot faults and abnormalities producing symptoms in later life start during childhood.

Craigmile in 1950 and again in 1952, decided to investigate the problem to see if it could be demonstrated when, and at what ages foot troubles first became apparent, and to attempt to elucidate some of the causes. She inspected 12,765 Middlesex school children and was interested to observe "very few of the children complained of any trouble with their feet at the time of examination, yet many were seen to have the beginnings of defects likely to cause them pain and disability in years to come."

Charlesworth, in his 1952 report and other more recent annual reports, discussed the results of a survey of 3,500 school-children. Dykes, Grundy and Lee give figures for the prevalence of foot disorders in an unselected group of 8,247. We can read the report of Stewart, who examined young army recruits in 1941; and we have later the foot survey by the Canadian Army Medical Service. It is evident then that there is a definite need for the competent foot examination of all school-children; a definite need for uniformity in the examining procedure; and for the introduction of a standard recording form. All the valuable data collected painstakingly over many years will be at great variance unless we accurately define and measure long arch weakness, metatarsus primus varus, and other foot defects. The great need is for a formula which could be used for research, such as the standard dental card which is used in dentistry. Then the recordings of a foot examination in a school of Connecticut will be comparable to one carried out in Colorado.

It is proposed in this paper to discuss the examination of the school-child, a type of recording card that can be used, one which was developed using ideas from more than a dozen different examining forms, and to report on foot defects found in 1,080 children and adolescents.

It has been mentioned that we must try and produce a standard form for use throughout the country. Of equal importance is the need for simplicity in such a form: (a) It must be uncomplicated, but cover the significant facts. (b) Be simple in design for easy filling out. (c) Require only short notations for often the examiner will not have the services of a clerk. (d) One that may be used for several examinations of the same individual, and yet must not be too large in size.

On discussing the problem of examining the school-child with an educator, I discovered that it is important to bear in mind some practical aspects. (a) The examination must cause the least disruption to the school curriculum. (b) We must not add further to the already overloaded school administrative machinery. (c) Our survey must be at a minimum expense to the employing authority.

Method

The school medical examination room is equipped simply with a small table for the recording clerk, a low chair for the

*Paper was awarded Honorable Mention in the 1959 William J. Stickel Awards for Research in Podiatry-Chiropody. Presented at the Annual Meeting of the American Podiatry Association, Waldorf-Astoria Hotel, New York, August 1959.

FOOT EXAMINATION RECORD FILE_____

NAME_____ DATE OF BIRTH_____

SCHOOL _____ M ☐ F ☐

ADDRESS_____

	1. Date___	2. Date___	3. Date___	4. Date___
1. FOOTWEAR				
Shoe Length				
Foot Length				
Socks Too Short				
	A B C	A B C	A B C	A B C
2. POSTURE				
3. DEFECTS	b c	b c	b c	b c
Genu Valgum				
Genu Varus				
Toe In				
Toe Out				
Pes Cavus				
LONG ARCH DEFECT				
Mobile				
Rigid				
FORE-FOOT				
Hallux Valgus				
Clawed Toes				
Overriding Fifth				
4. LESIONS				
Helomata				
Nails				
Verruca				
Callosities				
Fungus				
Hyperidrosis				
5. OTHER FINDINGS				
6. COMMENTS				
Signature of Examiner.				

Actual card measures 10" by 8"

examiner and a long gymnasium bench, one which is found in many schools. This type of bench is excellent for a foot examination. It is about 9 ft. long, 1 ft. wide on its top surface, and 18" high from the ground. The examiner sits at one end of the bench while the child walks along its length being examined for posture, ability to form arches on weight bearing and other foot positions. Upon reaching him the child sits down on the bench for further tests of the foot. This method causes the minimum of fatigue to the examiner whom we must remember will probably examine as many as 60 children per session.

It is more appreciated now that the examination of the foot must be considered in its relationship to the body as a whole; the findings above the ankle must be correlated with the findings in the foot. Therefore, I sought the help and coopera-

tion where I could of the physical education teacher. She arranged to have the class, whose turn it was for foot examination, to use the gymnasium for that session. The males and females were thus suitably dressed for a posture, leg and foot examination, and were dispatched in three's to the examination room.

Before removing their shoes the children were first examined for posture, shoe wear pattern and type. Short or shrunken stockings are noted, as these can be important etiological factors in foot defects, particularly of the first and fifth toe of the young. Whereas parents often appreciate that the constricting boundaries of a shoe may influence the growth of a child's foot, the insidious effects of a tight stretch nylon, or shrunken woollen sock, upon the growing foot may be, and often is overlooked.

Upon removing shoes and stockings the child walks barefoot along the bench and the long arches are checked under weight bearings. Then with the child sitting, the foot is generally examined for nail defects, warts, corns and callous formations. Palpation, tests for mobility, and other special tests are performed. This foot examination can be carried out in a matter of minutes, as for example, in one examination we had 348 females to examine in 18 hours, which is approximately 3 minutes for each child. This example is mentioned only to illustrate the point that we must do that which is practical, even though this may not always be the ideal. It must be remembered that in actual fact what we are doing is a spot clinical check and nothing more. Where serious pathology is suspected, and often such cases are already under medical care e.g. congenital dislocation or dysplasia, osteochondrosis, genu valgum and varus, genu recurvatum, tibia vara, the case is referred to the orthopaedic staff, family podiatrist, physiotherapist or school nurse, where a more detailed diagnosis will be carried out.

Posture

Posture is very much an individual characteristic with no set standard. The child will display his own particular type depending on factors such as age, sex, rate of growth, emotional background, personality, and chronic infections. So, whilst observing and noting the child's posture we bear these factors in mind.

During actual barefoot walking posture and foot positions are observed. However, to assess posture is most difficult for often a pure case of boredom, or the case of a child not liking some particular lesson, may alter its posture at the time of examination. A story will better illustrate the problem. Stamm, a noted orthopaedic surgeon, in London, England, during a National Foot Health Week in 1952, demonstrated posture with the assistance of Ninette de Valois, a noted ballet teacher. He had the ballet dancer control the posture of her feet by that of her body—firstly she adopted the weak, bad posture of the tired city worker and here she displayed knock-knees, a dropped tummy, caved-in chest, flat-footed attitude. Then the ballet dancer was asked to return to her normal self. All she did was to bring her hip muscles back into tone, and the body was now falling squarely on her feet which were no longer flat. This change from the weak flat-footed attitude to the strong active position is brought about simply by rotating the whole leg outwards from the hip. Wiles confirms this demonstration by stating that the posture of the hip joints is the key to that of the whole body because it determines the inclination of the pelvis, the rotation of the legs and the position of the feet. One psychiatrist writes that "good posture can create a favorable state of mind." Milton Lewis has this to say "good posture is vitally important to general health." General good health is cer-

TABLE I
FOOT EXAMINATION SURVEY

Age in Years	8		9		10		11		12		13		14		15		16		17		18		Total		
Sex	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	Total
POSTURE													S	E	E		T	A	B	L	E		2.		
FOOTWEAR (poor fit or design)	2	5	5	4	3	4	14	39	34	77	21	71	17	58	11	64	15	49	3	18	1	13	126	402	528
LONG ARCH DEFECTS	1	1	1	1	1	3	5	29	24	42	18	41	16	30	14	34	10	24	4	8	1	1	95	214	309
HALLUX VALGUS (Mild)	1	4	3	2	2	2	7	23	19	34	16	38	12	35	9	27	6	33	5	16	1	3	81	217	298
HALLUX VALGUS (Severe)	—	—	—	1	1	1	1	8	5	18	3	15	2	9	1	6	1	16	—	2	—	1	14	77	91
HALLUX RIGIDUS	—	—	—	—	—	—	—	—	—	1	1	—	—	1	—	—	—	—	—	—	1	—	2	2	4
OVERRIDING FIFTH	1	—	—	—	—	1	1	2	2	3	1	4	2	4	—	1	—	1	—	—	—	1	7	17	24
CLAWED TOES	—	—	1	—	2	—	4	4	6	10	11	16	5	4	3	4	3	7	1	1	1	1	37	47	84
NAILS	—	—	1	—	—	—	—	1	1	2	1	2	1	3	1	1	—	1	1	—	—	1	6	11	17
VERRUCA	—	—	—	—	—	—	—	4	1	7	1	8	1	4	—	2	—	—	—	—	—	—	3	25	28
CORNS	—	—	—	—	1	—	1	7	9	13	2	14	4	8	1	12	—	10	1	1	—	—	19	65	84
TINEA PEDIS	1	—	—	—	—	—	1	4	2	9	3	6	2	5	2	4	1	2	—	—	—	1	12	31	43
Number of Males and Females in Each Group.	8	12	15	11	14	13	32	87	78	134	59	122	58	102	42	94	38	76	17	34	11	23			
Actual Number of Children	20		26		27		119		212		181		160		136		114		51		34				1080

tainly impossible when a great deal of the body's vital force is being needlessly expended in maintaining the erect attitude.

In our examination of 615 females we graded the posture as "A" for erect carriage, no abnormal back curvature, legs and feet in good alignment. Less than 25% were thus classified. "B" is reasonable posture, often slouching rounded shoulders, dropping of one shoulder, abdominal slump, bow legs, knock-knee, lordosis to a mild degree, accompanied usually with a long arch defect. This "B" class which makes up nearly half the total, is referred to the remedial physical training class for re-education of postural habits and good gait. The children of this class with long arch defects, short heel cord and other conditions of the foot affecting posture are referred to the family podiatrist. The "C" group, poor posture showing marked defects of legs, shoulders and spinal curvature are noted for further investigation.

Shoes

The shoe upon removal is examined for its size compared to the foot size and for its wear pattern. Barnett, 1954 and 1956, described a plastic pedograph designed to record the forces acting upon the sole of the foot during walking, and by use of high speed motion film, both the position of the foot and the impression that the foot is making are recorded simultaneously. Using this apparatus it is possible not only to trace the center of transmitted weight throughout the step, but by simple measurement, to assess quantitatively the precise forces acting on the foot at any

given moment. Barnett, Bowden and Napier write in 1956—"By this means the altered pattern of weight distribution in a series of cases of muscle imbalance, resulting from peripheral nerve injuries of the lower limb has been studied. These findings correlated with the pattern of wear of the patient's shoes." It was found that there existed a striking agreement between the analysis of abnormal gait using the pedograph and that derived from a study of the shoe wear. It was concluded therefore, that if the evidence provided by the heels, the soles and the uppers of both shoes were taken into consideration and used in conjunction with the clinical findings, the study of the shoe wear was an entirely reliable clinical method.

Probably one of the best recent papers, on physiological footwear, is by Franco Fusi, an Italian orthopaedist, who has given much study to the design of footwear. He outlines a shoe accomodating the dynamic demands of the foot—

1. The axis of the sole corresponds to a line drawn from the centre of the heel towards the third metatarsal head and then inclining towards the ball of the great toe and passing along the second and third toes.
2. The toe section of the shoe should be at least equal to the foot.
3. The vamp must be high enough not to cause deforming forces of the toes.
4. The counters and shank must be rigid.
5. The heel must correspond to the peak of the medial arch, in line with the vertical axis of weight bearing of the calcaneous.

From his illustration, the shoe is quite attractive and should be acceptable to parents, children and to the manufacturer of childrens' shoes.

The parent is not altogether blameless

TABLE II
POSTURE CLASSIFICATION

Age Group	A.	B.	C.	TOTAL
11–12	51	108	62	221
13–14	23	117	84	224
15–16	81	63	26	170
TOTAL	155	288	172	615
	24.8%	46.1%	29.1%	

of lack of supervision and foresight in seeing that the child has shoes of correct fit and style. Cooperation and research by the industry are useless if the parent or the shoe retailer does not examine the correct fitting shoe on the weight-bearing foot of the child. As the parent or shoefitter can expect very little help from the child in fitting shoes, probably the follow-method may help. On the tiled floor of the Childrens' Shoe Department are imprinted charts with the outline of all foot sizes, each blank having a reference number for the appropriate shoe size. This eliminates the fluoroscope danger and the mother can see the child's foot plainly in its 'blank shoe.'

With more cooperation and constructive suggestions between our profession and the shoe industry much progress would be made in designing an ideal shoe for children. Table I shows that over 50% of the females are wearing shoes of unsuitable design and incorrect fitting, with the figure as high as 65% in the 14-16 year olds. One manufacturer in Britain has undertaken to provide shoes to 40 children diagnosed as suffering from foot defects capable of being arrested or relieved with correctly fitting shoes. This the company will do, free of charge,

TABLE III
PES VALGUS (Long Arch Defects)

Number of Children		Age	Female		Male	
Female	Male		No. of Cases	Percent	No. of Cases	Percent
		8	1		1	
		9	1		1	
		10	3		1	
36	37	8–10	5	13.9	3	8.1
		11	29		5	
		12	42		24	
		13	41		18	
343	169	11–13	112	32.7	47	20.7
		14	30		16	
		15	34		14	
		16	24		10	
272	138	14–16	88	28.2	40	28.6
		17	8		4	
		18	1		1	
57	28	17–18	9	16.1	5	17.8
708	372	Total Cases	214	30.4	95	24.8

for a period of six years. Their findings should prove interesting.

Pes Valgus (Long Arch Defects)

Over 30 percent of all females examined had long arch defects (Table III) with the figure reaching 35% for the 12-15 year group. In this age group, and particularly the females, there were many who displayed a low arched foot with great degree of ligamentous laxity. They had valgus ankles and an inward rolling of the foot, but were however able to produce an arch on tip-toe standing. The foot appeared asymptommatic and their posture was reasonably good. It seems (without jumping to conclusions), that a congenitally low arched foot, where there is no "stiffness" in the joints, can be quite good functionally and trouble-free. It was not practical in my examination to do this, but for a more thorough and detailed investigation, every child showing signs and symptoms of valgoid defects should be examined completely disrobed. Only then can we relate our findings in the foot with the child's general physique and posture.

"Let us break away from a meaningless term." So wrote Schuster in 1927 when discussing flatfoot or pes planus. The term is just as meaningless today. The Army Foot Survey, Ottowa, refers to "pronation of the tarsus," and if there was any degree of pronation, recruits' feet were examined from behind. They claim "pronation may occur in mildly high arched feet, in otherwise normal feet, and in 'flat feet.' The presence of mild pronation alone is not a cause for down-grading. It is, however, a defect which apparently aggravates the symptoms caused by other defects." The importance of the tendo-Achillis alignment was explained in their examination. Roper says of pronation "a sort of rolling over inwards towards the other foot." Hiss explains that "pronation accompanies eversion," an outward curving of the foot upon itself. Hauser defines pronation as "when the heel is turned out or everted it is in valgus, when the heel is turned in or inverted it is a varus position. When the anterior part of the foot is displaced so that it lies medial to the vertical axis of the leg it is in adduction, and when it is displaced so that it lies lateral to the vertical axis it is in abduction. The foot is in supination when the anterior part is elevated on the inner margin, and in pronation when the outer margin of the anterior part is elevated." Gray, Wood Jones, and other precise anatomists use the term pronation, only in quotation marks. In fact Wood Jones states "the condemnation of the flat

foot, simply because it is flat, is a stupid business." We can see then how difficult it is to precisely record our findings and to agree on a measure of uniformity in examining the long arch of the foot.

For a practical approach in a school foot survey one has to rely solely on clinical impressions, as there is no practical method as yet, of measuring pronation, pes valgo-planus or valgoid deformities of the foot. Therefore in my clinical diagnosis of pronation I consider the direction of the tendo-Achillis, the degree of forefoot abduction, the relationship of the calcaneum with its tendon and the position of the tibia.

However, I feel we are well on the way to being able to measure quantitatively postural long arch defects. For if we reason the majority of pes valgus cases are assumed foot positions, (ruling out congenital pes planus and spastic peroneal flat foot, tibial torsion, short tendo Achillis or paralysis) and we accept that the hip joint is the key to the posture of the leg and foot, we can, by using Wiles pelvic inclinometer measure the inclination of the pelvis, the average for males being 31 degrees and that for females 28 degrees. We then measure the relation of the large joints to the plane of the center of gravity of the body. This plane normally passes through the middle of the shoulder and hip joints, towards the front of the knee and in front of the ankle joint, to extend approximately just behind the first metatarsal phalangeal joint. The third measurement we can take is on the posterior aspect of the heel, where we relate the central axis of the tendo-Achilles to the central axis of the calcaneum by using the Knowle device. These three measurements could be reduced to a 'norm' by a field experiment of examining and measuring several thousand children of all ages. Deviations from the calculated 'norm' would then be expressed as degrees of postural pes valgus.

TABLE IV
HALLUX VALGUS of all degrees

Number of Children		Age	Female		Male	
Female	Male		No. of Cases	Percent	No. of Cases	Percent
		8	4		1	
		9	3		3	
		10	3		3	
36	37	8–10	10	27.7	7	19
		11	31		8	
		12	52		24	
		13	53		19	
343	169	11–13	136	39.5	51	30
		14	44		14	
		15	33		10	
		16	49		7	
272	138	14–16	126	46.3	31	22.1
		17	18		5	
		18	4		1	
57	28	17–18	22	39.3	6	21.4
708	372	Total Cases	294	56	95	24.8

Hallux Valgus

The first metatarsal is probably the crux of the foot, therefore, we must, in examining school children give special attention to this segment, its deviation from the normal alignment, its range, and freedom of movement. As you will see from Table IV, lesions of this important member of the foot are unfortunately high especially in the females. We start with over 30 percent in 11-year-olds and as we ascend the age scale so our figures correspondingly increase, to where we have nearly half of the females from 14 to 18 years displaying valgus deforming of the hallux. The males

at the age of 16-18 showed a much less figure of under 20 percent.

Hardy and Clapham (1952) have shown that in school children the great toe has assumed a valgus position of adult degree by the age of 15 years, and they have also shown that females suffer a greater degree of deformity than males, and constitute 85 percent of those attending for subsequent orthopaedic surgical correction. These two investigators found by punched-card statistical methods that metatarsus varus and hallux valgus were closely associated, but do not state that the varus caused the valgus, as the valgus showed its greatest increase before the age of 14, and the inter-metatarsal angle after the age of 15.

At the Annual Meeting of the American Academy of Orthopaedic Surgeons in 1956, Mitchell, Fleming, Allen, Glenney, and Sanford from the Ford Hospital, Detroit, presented a most detailed paper on theories of etiology of hallux valgus. The senior authro states that he has "long believed that metatarsus primus varus is the primary deformity and that it is congenital. The hallux is gradually pushed laterally first by the shoe and subsequently maintained in a valgus position by the bowstring effect of the long extensor tendon."

In my examination it was not practical to use a pedograph, x-ray, or pedoscope for diagnosis, therefore I have nothing to add to these findings. However, we did uncover a large number of great toe defects, and suggest that all cases uncovered be referred to the podiatrist for x-ray to determine the first metatarsal angle.

If metatarsal varus is found, a printed card should be given to the child to take to the shoe store, identifying this fact. The shoe-fitter will then know the child requires the greatest care in shoe fitting and should refer the child back to the family podiatrist for approval of the shoe before it is worn.

Verruca

Since the work of Jadasshon in 1896 we have accepted that warts are innoculable and probably due to a virus-like organism. Bunting 1952-53 has more recently produced evidence to show that it is a virus. 2,839 school children of Dixon, Illinois were examined at weekly intervals by Grace and Wilhelm in 1953 and during that year these investigators found 4.7 percent of the pupils had plantar warts. Rook, Banks and Smith in 1955 undertook a survey to discover the incidence of plantar and other warts amongst a selected group of children, and to determine the effect of area, age and sex. They examined 13,423 children drawn from 107 schools, the sexes were roughly equal. They found 6.5 cases per 1,000. Plantar warts were approximately twice as common in females as in males and the incidence increased with age in both sexes.

Plantar warts appear to be more common in the large single-sex schools than in their co-educational counterparts. Thus in my examination of a large girls' school I found 21 cases of plantar warts in 348 pupils. This figure certainly is higher than that found by other investigators, but, since we are here dealing with an inoculable virus, an epidemic in the school could occur, which may explain this large number.

Corns and Overlapping Toes

Fifth toe helomata occurred mainly in the females of age group 12-16 to the extent of 10 percent of the total examined. This finding is of important interest, for this lesion is usually the first sign of foot pathology leading to the more serious complaints of adult life. I would mention here of one case, a female of 15 years with congenital overlapping 5th toe bilateral. Father and two sisters also had the same deformity. Her physician had advised amputation. On examination she had covered both scars with band-aid and was

extremely embarrassed by the loss of her fifth toes. She mentioned she would not go with the girls to the beach or swimming for that reason.

Six females displayed abnormally high long arches, however, two cases of congenital pes cavus were diagnosed along with one case of paralytic pes cavus from poliomyelitis. The males, however, showed many cases of mild degrees of lesser toe contraction, or clawing, which gives the foot a pes cavus appearance. This I cannot explain except perhaps by short shoes, and especially the tendency for the males to favor a tight fitting gymnasium shoe.

Conclusion

To organize a program of routine foot inspection for all school children poses many problems. Difficulties of personnel, finance and administration will have to be overcome. It is my hope that this paper will, together with the experience and advice of other investigators, help in overcoming the problems and bringing the day nearer when competent foot examination is available for every school child.

14 Green St.

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"True godliness does not turn men out of the world but enables them to live better in it and excites their endeavors to mend it."

William Penn

CLINICALLY SPEAKING

A place for the more informal presentation of reminders, suggestions, notes, observations and technics of value in office practice. Your contributions of short manuscripts or illustrative case histories will determine this section's usefulness.

BALANCED GENERAL ANESTHESIA IN FOOT SURGERY

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INHALATION anesthesia must be used in preference to local anesthesia in a certain number of operations on ambulatory patients. The demand for it may be occasioned by the request or temperament of the patient, the nature of the contemplated procedure (especially inflammatory lesions), or the particular preferences of the operator.

Nitrous oxide, trichloroethylene, with oxygen, is a pleasant, non-inflammable, gaseous anesthetic agent which is quite satisfactory for ambulatory patients if good muscular relaxation is not required. Nitrous oxide with oxygen is extensively used, and is generally considered a safe anesthetic. The agents in themselves are not toxic, but when it is administered with low or relatively low concentrations of oxygen, as is often necessary to induce sufficient anesthesia, there is definite danger of respiratory embarrassment, and its sequelae, because of anoxemia.

Pentothal Sodium,®[1] and related rapidly-acting, soluble barbiturates, are useful agents for producing anesthesia for short operative procedures when injected intravenously. These agents rapidly produce anesthesia, usually with little or no period of excitement, and the recovery period is short since Pentothal Sodium is rapidly decomposed in the liver. Post-anesthetic restlessness and other unfavorable reactions such as nausea and vomiting are infrequent. Adequate surgical relaxation may be obtained with this agent. As a rule the recovery period following the use of intravenous barbiturates is too long to warrant their use in ambulatory patients unless a room is available for them to rest in for an hour or two after operation. Anoxemia due to respiratory depression or laryngeal spasm are the chief complicating factors which may be encountered with intravenous anesthesia. This occurs when the anesthetic is administered too rapidly.[1]

Synergism in Inhalation Anesthesia

By synergism is meant the combination of two or more agents to produce a more effective result in the administration of anesthesia. In synergism, the technique is to reinforce nitrous oxide and oxygen with vinethene or trichloroethylene.

Synergism is not sequential in anesthesia. In sequence, the nitrous oxide and oxygen is used to pave the way for the agent of choice, for example, ether and vinethene. In synergism, trichloroethylene is, for example, added to supplement or potentiate the analgesic effect of nitrous oxide and not to supplant it.

For synergistic purposes, the preference today is trichloroethylene. Trichloroethylene is an agent that is admirably suited for ambulatory patients. It is not objectionable to the patient as action is rapid. It is not explosive, non-irritating to the mucous membranes, nausea is absent and recovery is easy and reasonably prompt.[2]

There are four phases or stages in inducing general anesthesia:

1. The first stage ends at the loss of volitional self-control; the higher cortical centers lose their activity; pain

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®[1] Abbott

sense is lost; the conjuctival reflex is partly abolished.

2. The second stage of anesthesia ends with loss of consciousness.

3. The third stage, or deep anesthesia, ends with muscular relaxation. This is the stage of surgical anesthesia.

4. There is a fourth stage to be feared —that of respiratory paralysis, generally due to overdose of the anesthetic agent.[3]

Illustrative Cases

The following two cases of nail surgery bear out the fact that general anesthesia, in the hands of a properly trained anesthesiologist, can make pedic surgery much easier, with little or no untoward reactions on carefully selected patients.

Case I. Patient R.H., 6 ft. 4 in., 195 lb., 14-year-old male, medical history essentially negative. Patient's chief complaint was that of "ingrown nails," tibial and fibular side of left great toe, with exuberant granulation tissue on both sides. This patient was highly apprehensive, having been treated by two physicians previously for the same condition. His threshold of pain was such that no local anesthetic agent had any effect on him.

The patient underwent nail surgery under general anesthesia administered by the anesthesiologist, as follows: 10 cc. of 2% Pentothal Sodium was injected into the antecubital vein of the right arm. After the first stage of anesthesia was reached, the patient was put on inhalation anesthesia, nitrous oxide 80%, oxygen 20% and trichloroethylene. After one half hour, nitrous oxide 65% and oxygen 35% was used. After fifty minutes, nitrous oxide 50% and oxygen 50%, terminating with pure oxygen for ten minutes.

After surgical procedure was complete, patient was taken to recovery room. A little nausea was experienced but lasted a very short time. Patient slept in recovery room for about one hour. Patient's brother then took him home for bed rest. Patient was given a prescription for Nembutal®[1] ½ grain and aspirin 5 grains; q.4 h., p.r.n. for pain. Patient seen periodically post-operatively.

Case II. The second case in point was that of C. S., a 31-year-old male. Medical history was essentially negative. The patient's main complaint was that of a chronic incurvated nail, tibial side of right great toe. Patent was very calm and cooperative and underwent nail (sub-total onychectomy and matricectomy) surgery. General anesthesia was induced in the manner described for Case I. No premedication was necessary and the patient was instructed not to eat or drink the morning of the scheduled surgery.

After surgery, patient was sent to the recovery room, where he suffered no untoward reaction to the general anesthetic agents. He remained in the recovery room for approximately one hour. A friend of his then took him home for bed rest. Patient given post-operative instructions and a prescription for Nembutal 1½ grains and aspirin 5 grains, q.4 h., p.r.n. for pain and also Mysteclin-V®[2] 250 mg. q.6 h. Patient made an uneventful recovery.

Summary

1. The use of balanced general anesthesia and anesthetic agents in foot surgery is discussed.

2. Proper anesthesia on chosen patients, administered by a trained anesthesiologist or anesthetist is described.

Writer wishes to acknowledge with thanks the administration by Morton Sosna, D.D.S., of the general anesthesia used in the cited cases.

15 Market St.

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®[2] Squibb

ARTERIOSCLEROTIC, DIABETIC GANGRENE

A Case Report

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St. Louis, Mo.

THIS is a case history of Mr. E., a 73-year-old, white male, 5'8", 160 lbs., who was referred to this office with the complaint of traumatic injury to the great toenails. The patient was seen on the 19th of April and appeared in good spirits.

The patient had been having bladder trouble for a period of years, and twice during examination had to void. Mr. E. had undergone a prostatectomy in 1951, which he felt was far from successful.

The immediate history revealed that the patient had dropped a fence pole on his right great toe some two months previously and had been treated by his family physician for the injury and an infection which developed at the site of injury a few days after the accident. Patient's physician was presently on vacation and Mr. E. wished to have the toe checked.

Examination of the great toe disclosed a black crusted mass, extremely dry in appearance. No expected signs of infection were present but there was blanching and coolness accompanied by clamminess of the part, with very little edema. No odor was noticed.

The patient revealed he had been prescribed an antibiotic by his physician, and feared some kind of reaction was causing the damage, and pointed to the left great toe on which was a hypertrophied nail. The nail plate was reduced, exposing a caseous-like mass. It had been noted that there was a small fissure on the medio-plantar aspect of the skin about the first metatarsal-phalangeal articulation. Coolness and clamminess of this part was also noted but not to the degree found on the right foot.

It seemed that the condition was not a simple case of injury complicated by an infection. It was possible that the black crusted material on the right toe could be dry gangrene. It was also possible the infection might have left the toe crusted in such a manner. It was decided to put the patient on hot soaks for 2 days in an attempt to soften the mass and if gangrenous, to separate the necrotic area and make it more discernible to visual examination. The patient was therefore given instructions for soaking and reappointed for the 21st of April.

Because of the frequent interruption for voiding and because he admitted to much 'thirst,' the patient was also instructed to bring in a specimen of urine at his next visit.

On the 21st, Mr. E. reappeared at this office. Upon firmly grasping the bandaged toe and reaching for the scissors to clip the bandage away, the examiner turned back with the scissors in hand to find that he still held the toe, though not attached to the foot. The amputated toe left a yellowish textured skin beneath with no evident bleeding. The surrounding area now was warmer to the touch and the patient disclosed that the area had not felt that good in many months. "It feels as though there's life in it again," Mr. E. reported, even though the anterior dorsal surface of the toe had been avulsed with the gangrenous tissue and 2/3rds of the distal phalanx protruded. Meanwhile the small fissure previously described on the other foot, now appeared about the diameter of a dime.

An individual of this age, with a very weak dorsalis pedis pulse, could hardly escape arteriosclerotic changes, to which the coolness and clamminess of the part and the gangrene could be attributed, aggravated by trauma. However, as Cabot[1] pointed out in his book *Physical Diagnosis*, back in 1905, "Gangrene is usually the result of arteriosclerosis with or without diabetes mellitus. . . ." A check of the urine specimen confirmed this in Mr. E's

case. The patient was then palliatively treated and referred to a physician with the above findings.

Why the indications of diabetes weren't noticed prior to this examination may be understood by Greenbaum's[2] comments on gangrene, "It is not uncommon, and may be frequently observed in patients with diabetes who are apparently in good health and who do not have an abnormally large amount of sugar in the blood . . . it is generally believed to develop as a result of peripheral vascular inflammation and decreased blood supply rather than as the result of hyperglycemia. Infection plays a secondary part in the moist types. The lesions usually appear on toes and fingers, or as necrotic lesions on the legs and feet, often spontaneously or following a slight injury. They are frequently in the form of bleb covered areas, ranging from grayish brown to black and may follow either a rapid or a slow course. Frequently, diabetes is not known to exist until after the development of gangrene."

In summary, this case is presented because the instance of diabetes in the population is far from small. In fact, as pointed out in the eighth edition of the Merck Manual[3], "The disease is most common in the 5th and 6th decades of life. . . . It is estimated that 1 and 2% of the U. S. population are diabetics, with males and females equally affected." Often the chiropodist will be the first practitioner to come in contact with the condition, and therefore should be thoroughly familiar with its manifestations, some of which have been described in this article.

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CHARCOT'S DISEASE

A Case Report

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CHARCOT'S disease or neurotrophic arthropathy is a condition which may result from syringomyelia, diabetes or tabes dorsalis. The differentiation as to the etiology is not a serious difficulty even by using a method of elimination as a result of symptoms. This is really important as Wasserman tests of both blood and spinal fluid may be negative. In most cases where syringomyelia is the etiologic factor the disturbance is in the upper extremity. In diabetes the blood sugar level and the general history of the presence of diabetes will be evidence. In tabes dorsalis there is often an absence of normal knee and ankle reflex response, Rhomberg's sign is usually present and Argyll Robertson pupils may or may not be observed.

Charcot's joints are reported in practically all orthopedic texts. The joint usually involved is the knee and less commonly the ankle. At times the disease may be present in the tarsus without involvement of the ankle joint itself. Because of this and because of its unique stages of progression it should be kept in mind by all chiropodists. Unfortunately in the textbooks nothing, or at the best very little is reported as to the earlier appearances of these joints.

It is a serious and progressively destructive disease which may make its first appearance in one bone of the tarsus and then gradually progress to others until the entire tarsus is involved. Again it may start in one bone and be limited to perhaps that one bone alone. This, however, is the exception to the usual picture.

The original changes seem to appear in the cancellous bones before any symptoms are seen in the joints. Swelling of the sur-

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rounding soft tissue is almost always present as an early sign. The later changes have been well described in text books and show in x-ray views complete destruction of the joints and most of the bones forming the joints. There is great significance in the fact that there is present in the diseased area places where the bone is denser than normal. There is bone proliferation and there are also many areas of cystic degeneration. Subluxations and dislocations are present and finally the area in no way resembles the joint or joints that were originally involved.

The following report covers a period of four years starting as near as possible to the symptomatic onset and continuing until a fairly typical Charcot area developed involving almost all the tarsal joints.

The patient is a man about 38 years of age. His early history revealed that he had suffered only minor ills. The patient disclaimed any knowledge of syphilis or any "blood disease." The patient's family physician made a similar report but stated that he had not had a Wasserman or other similar test made. The patient was a heavy set hard working and muscular man used to lifting objects 150 to 200 lbs., and he was apparently in good health.

A little over four years ago he stated that he had a minor accident wherein he slipped —not falling—but bringing his full weight down on to the anterior portion of the left foot. This caused him some immediate pain but he was able to proceed with work as usual. For the next three or four days he applied home remedies to his much swollen foot and did not seek any professional care. His foot continued to remain swollen and painful and on the fifth or sixth day following the injury he reported to a chiropodist for examination.

X-ray examination of the left foot revealed a slight narrowing of the navicular and a small detached fragment on the dorsum. Very careful observation disclosed several hair line cracks in the body of the bone which ran in several directions. There was also a roughening of the superior margin of the neck of the talus and a slight roughness between the medial cuneiform and the second metatarsal bone. The rest of the bones and joint spaces seemed normal.

The foot was supported by a Gibney boot over a gauze bandage and the patient instructed to limit his activity as much as possible. During the next two or three weeks a dermatitis developed and this proceeded to extend up his left leg (higher than the application of adhesive). Ultra violet ray was resorted to but it had only little effect. Seven weeks after the original injury the patient was hospitalized for three or four days for treatment of the dermatitis and it responded quite satisfactorily.

From this time on the patient was under the care of his family physician and no chiropodical care of any kind was administered.

After discharge from the hospital further x-ray examinations were made of the left foot. They revealed that the original fragment was now further away from the parent bone and was somewhat denser than when seen in the original film. The foot was still greatly swollen and in fact swelling continued throughout this entire history and is still greatly enlarged at the present time. On his discharge from the hospital the foot and ankle were supported with an ace bandage, the patient was supplied with crutches and he was told that he must not permit the injured foot to do any weight bearing. After about nine weeks of this type of foot rest the left foot was again x-rayed and the patient was permitted to resume limited duties at work. A blood Wasserman was also done and the report was negative. The patient discontinued the use of the crutches and was able to walk without them and even without any supporting bandage.

Further x-rays showed that in addition to the original fragment two or three smaller ones, considerably denser, were now visible below and to the sides of the original. The body of the navicular showed several small areas of lessened density and the anteroposterior dimension of the bone was noticeably smaller than in the original exposures, particularly at the lateral end. Beginning degeneration was also noticed in the cuboid and in the lateral cuneiform. The changes here noticed consisted of some areas of lessened density intermixed with others of increased density and with some proliferation of osseous tissue.

The patient resumed working regularly but he was not able to do the heavy lifting that he did formerly. He was able to put in the full number of weekly hours and seemed to have accepted his deformity and limitations. His foot continued to be greatly enlarged and he received some degree of comfort by wearing a so-called orthopedic shoe which he had obtained on a nonprofessional friend's advice.

About three years after his return to work more x-ray studies were made of his diseased foot. They showed that the area involving the entire midtarsal joint and extending to the bases of the second, third, fourth and fifth metatarsal bones was much denser than normal. Some scattered cystic areas were present and there were several small sequestra in various positions. The joints were discernible in places but they were distorted, uneven and in only a vague way resembled the normal articulations. The forefoot was abducted. The ankle joint itself does not show any involvement. Flexion is possible to the same extent as the normal foot. Extension is only slightly limited. Inversion is practically absent but eversion is possible to only a few degrees less than normal.

With the discovery of penicillin as a great weapon in the treatment of syphilis, it was generally believed that this great scourge would eventually be wiped out. Maybe in the distant future this dream will be attained but it must be remembered that at the present time there are many tertiary syphilitics present among us. Some of these individuals are our patients and any one of them may be a potential Charcot case. This is not only possible but probable.

In summarizing, I would like to emphasize the following: The earliest phase of Charcot's Disease shows little if any roentgenological changes. Swelling of the soft tissues may be one of the first signs and pain may or may not be present. There is usually an absence of normal knee and ankle reflexes and a positive Rhomberg's sign is present. The neurotrophic disturbances cause a gradual weakening in the internal structure of the bone so that a minor injury or an accumulation of minimal traumata can cause a breakdown in one or more bones of the foot.

The disease is progressive and there is no known way of preventing its progression. Arthrodesis of the entire tarsal area has been resorted to in some cases which have been recognized in the early stages and this has met with success to a limited degree. There are no reported cases where after fragmentation has occurred that healing of such has taken place.

The case here presented is the first that the author has encountered and it is presented so that others may become acquainted with the early signs of this condition in the foot.

3520 N. Broad Street

"No man can set himself above the laws of his God and his fellow men."

Anon

ATYPICAL EPIDERMOID CYST
A Case Report

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A PATIENT D. H., male, 18 years old, presented himself, complaining of pain in the ball of the right foot, plantar metatarsals 2-3-4. Area (Fig. 1) was a distention under the heads of metatarsals 2-3-4. Although keratinized, the area or growth beneath was freely movable, as a palpable flocculent mass deep to the callused tissue.

A history of having stepped upon a nail some five years prior with gradual development of the painful lesion now present. The mass is somewhat pliable and painful on lateral compression. Due to the distention and history, epidermoid cyst was suspected.

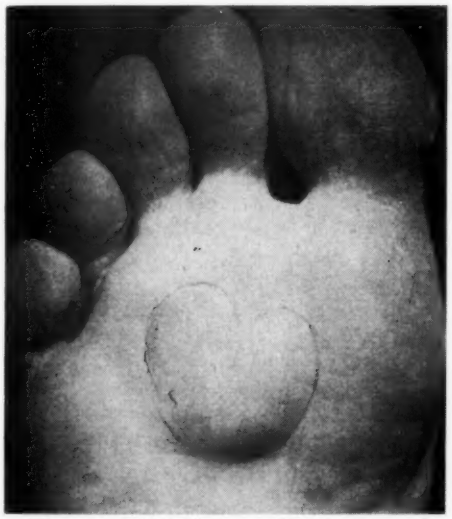

Fig. 1. Distention under metatarsal 2-3-4.

Roentgenograms were negative to osseous change, but there was definite soft tissue change and outline of the growth. Preoperative laboratory findings for urine and blood were in normal ranges. Preoperative medication—Tuinal®[1], three (3) grs., 45 minutes pre-operatively.

Fig. 2. Half flap incision revealing growth.

Asepsis was obtained as for standard surgical procedures. Anesthesia was established by a posterior-tibial block employing 3½ cc. Xylocaine®[2] 2%, being careful to aspirate prior to depositing the anesthetic. With anesthesia obtained, a Martin-type cuff was applied posterior to the area of the lesion and covered the foot, ankle and lower leg, so as to provide added hemastasis. Additional infiltration of 2cc. 2% Xylocaine with ephedrin 1:100,000, was infiltrated into the area about the lesion. The area of the growth measured approximately 2½x3 cm.

Surgical Technique

The primary incision was made at the lateral edge of the growth in a semi-elliptical line crossing transversely adjacent to the sulcus formed by the distention of the growth. The incision was about five cm. in length. The skin was slowly retracted and the growth exposed and found to be tenaciously attached by connective tissue bands to the underlying structures. Upon exposing the growth laterally, it did not lend itself to facile removal as many claim. The incision was therefore lengthened and extended into a

®[1] Lilly ®[2] Astra

full half flap (Fig. 2). The growth was found to be invaginated, with its connective tissue attachments, into the foot to the depth of the flexor tendons. The mass was now excised (Fig. 3) by both sharp and blunt dissection in toto, and prepared for the pathologist's examination. Closure of the wound was made by eight interrupted 000 dermal sutures and the application of Aureomycin®[3] surgical powder to the wound and held by a thick compression bandage so as to facilitate coaptation of the dermis with the underlying tissue and to prevent hemotoma formation.

Post-operative Medication

The patient was medicated with Darvon®[1] compd. 32 mg. Q.I.D. prn. Rest and elevation of limb and the application of an ice pack were prescribed.

Post-operatively the pain was minimal, healing was protracted at first by a hematoma, which was reduced and the patient allowed to ambulate with crutches on the fourth day. Sutures were removed on the 14th day. Scar tissue was negligible and weight bearing on 21st day was excellent without any aid.

R[3] Lederle

Pathologist's report: Growth (Fig. 3) 3x2 cm. dia. filled with sebaceous material. Microscopic: lining of the cyst replaced by foreign body type of inflammatory reaction. Diagnosis: Epidermoid cyst.

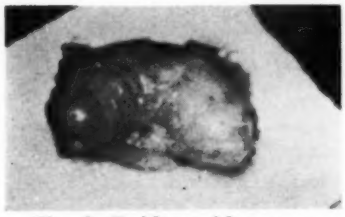

Fig. 3. Epidermoid cyst removed.

Summary

This is a normal procedure for this type of lesion. It was however necessary to change original technique due to the growth's tenacious attachments not allowing facile removal from smaller incision and simple blunt dissection, as is commonly supposed by most authorities. Invagination of the tumor and its strong attachments is believed due to the weight bearing location and long history of its presence.

1009 Farmington Ave.

"The true mission of the United States (is) to prove that . . . the happiness of individuals, as well as the grandeur of nations, is to be promoted by that greatest of all commands, 'do unto others as ye would that they should do unto you.'"

Henry Carey, 1859

JOURNAL

OF THE

AMERICAN PODIATRY ASSOCIATION

The Official Publication of the Podiatry-Chiropody Profession

PUBLISHED UNDER THE DIRECTION OF THE BOARD OF TRUSTEES BY THE
AMERICAN PODIATRY ASSOCIATION

3301 Sixteenth Street, N.W., Washington 10, D. C.

A. RUBIN, D.S.C., Editor

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PRESIDENT'S PAGE

IN MY inaugural address I stated my belief that we all have an obligation to our predecessors who established our profession and brought it and its institutions to its present position. I also stated my belief that this obligation extends to our teachers, our families and the general public. This obligation can never be discharged and requires constant effort, individually and collectively.

I BELIEVE that part of this obligation requires us to provide an ever improving foot care service. We must keep abreast and help to move our art and science forward. We do this through our periodicals, our meetings, and our institutions. Too many of us only take from them. As well as learning, we have an obligation to contribute papers to our periodicals and meetings. For many reasons only a few of us are privileged to participate in the teaching and training programs in our schools. All must contribute financially so that our educational institutions are the finest. Give to your school or alumni foundations directly or through the Fund for the Advancement of Podiatry-Chiropody Education.

I BELIEVE that a part of our obligation is to make our necessary service available to more and more segments of the general public. One way we do this is by letting more people become familiar with us by participating individually and collectively in community service programs. Participate in interprofessional relations programs, Health Career Projects, Youth Fitness, Civil Defense and Disaster Mobilization, Conferences on Aging, Health Insurance Relations, P.T.A. and other service programs.

I KNOW that efforts to discharge our obligations are, like "bread upon the waters," returned many many fold.

MARVIN W. SHAPIRO, D.S.C.

RESEARCH AWARD PAPERS

For the past fifteen years the Association, supported by grants, has made awards for research papers. The work presented in some of these papers has influenced considerably methods of practice. Other papers have given us a better understanding of aspects of treatment, the physiology of foot function, the pathology of certain conditions. Some have been excellent reviews. All have contributed materially to our literature.

Elsewhere in this issue is the first announcement of the Awards for 1960. The central core of the scientific sessions at our 1960 annual meeting will be on problems of the aging. We hope that many of you who have an interest in these problems and these people will tell us about it through the medium of these papers.

The public, all the health sciences, and especially we, need statistical information on the kind and incidence of foot problems in the aging. Members serving foot clinics associated with our schools, at homes for the aged, and at hospital in- and out-patient departments, are especially able to supply this information. We need current and better information on prophylaxis and hygiene. We need better and better information on routine and special problems and technics. We need better evidence as to how and why adequate foot care programs can reduce deterioration in the aged. We need information to develop educational programs for those who will one day be the aged, so that their feet will resist the ravages of time. We need information on what diagnostic signs of systemic problems appear in the foot.

Of course papers on all subjects are welcomed. And the authors of all the better papers, not just the award winners, are invited to present their papers at our annual meeting.

REPORT OF ANNUAL MEETING

Headquarters office of the Association has received a number of requests regarding the business that was transacted at the Annual Meeting. Many of these requests have been about the Constitution and Bylaws which underwent extensive revision. There is much language that has to be checked carefully. A major portion of the December issue of the *Journal* will be devoted to the official proceedings of the annual meeting. Included will be the action taken on resolutions presented, the complete Constitution and Bylaws, the Auditors Financial Report, and the Budget adopted for 1959-60. An Abstract of Proceedings of the Annual Meeting is published separately and will be distributed in November to all State Societies and Delegates and Alternates to the Annual Meeting.

PRESIDENT SHAPIRO IN EUROPE

Immediately after his inauguration as President, Dr. Shapiro left on a European trip to England, Russia and France. Since he would be there, the Association asked him to visit and talk with peoples and institutions interested in foot health in those countries. Our 1962 Annual Meeting will be our Fiftieth Anniversary Meeting and it is planned that a part of this meeting will be an International Conference on Foot Health. It is the hope that Dr. Shapiro's visits and conversations will aid in having some of these people appear at the 1962 meeting. Dr. Shapiro will also have some interesting reports for our readers.

WASHINGTON REPORT

Federal Employees Health Benefits Act of 1959

Approved by both houses on the final day of the 1959 Congressional session, the Federal Employees Health Benefits Act of 1959 will become effective in July, 1960. It will offer a choice of four different plans which provide payment by a carrier under contracts with physicians, hospitals, or other providers of health services. Note: The June Journal contains the statement by the American Podiatry Association before the Senate Subcommittee. A similar representation was made before the House Committee on Post Office and Civil Service by the Association on August 6, 1959.

Many House members are co-sponsors of a complementary bill which would extend health insurance privileges to retired Federal personnel. The strong support for this measure and passage by Congress early in 1960 would have it also become effective in July.

FHA-Type Student Loans

The Senate will be asked next session to make it as easy for a young man to acquire a college education as it is for his parents to buy a home under FHA. The FHA principle, under which millions of homes have been purchased with Government mortgage insurance, may be applied to college education expenses. Senate Democratic Leader Lyndon Johnson has just introduced a bill to this end, explaining he hopes for action next year.

It would work this way: A college student would borrow up to $1000 a year for four years from his school. His debt would be 100 per cent guaranteed by the Federal Government, just as the U.S. now insures home mortgages. After finishing his schooling, he would repay the loan, at a rate of interest to be determined by the loaning college. The college would obtain money for the loans by discounting the student's note at its bank.

Senator Johnson's bill proposes that the Government insure $100 million worth of such educational debt, and his prediction is that, like FHA, it will not cost the taxpayers a penny. "The bill I am offering," he told the Senate, "would not put a charge on the budget. The Federal Government's only part would be to insure the repayment of the loans to the colleges or to the financial institutions by the students themselves. As far as the student is concerned, this measure could be described as a work now-pay later program. What he would be offered is the opportunity of financing his college education out of future earnings."

CONGRESSIONAL COMMITTEE ACTIVITY

Senate Subcommittee Studying Aging to Travel:

The Washington hearings on problems of the aged was recessed early in August and subcommittee chairman Senator Pat McNamara of Michigan has announced the following schedule which will have the committee hearing further testimony in seven cities: October 13-14, Boston; October 21, Charleston, West Virginia; October 23, Pittsburgh; October 28-29, San Francisco; November 16-17, Grand Rapids, Michigan; December 1-2, Miami, Florida; December 11-12, Detroit.

House Ways and Means:

Committee will hold hearings on tax revision measures from November 16th through December 18th, 1959. Numerous topics of direct interest to medical practice will be discussed, including deductions of medical expenses; tax incentives to increase physicians output; taxation of the aged; pensions and employee benefits plans; treatment of tax exempt organizations.

TARARA APPOINTED CONSULTANT TO WHITE HOUSE CONFERENCE ON AGING ON AGING

In January 1961, the first White House Conference on Aging will be held in Washington, D. C. At the direction of Congress, the Secretary of Health, Education, and Welfare, Arthur S. Flemming, has been given the responsibility of initiating, planning and preparing for this Conference. He will have assistance of the heads of several other Federal departments and agencies, and of a broadly representative National Advisory Committee of experts and citizens.

Edward L. Tarara, D.S.C., of the Mayo Clinic in Rochester, Minnesota, has been appointed as Consultant in Podiatry to the Planning Committee on Health and Medical Care of the 1961 White House Conference on Aging. Dr. Tarara attended Rochester Junior College and graduated from Illinois College of Chiropody in 1940. He is a Past President of the Minnesota Podiatry Association and a former member of the Minnesota State Board of Examiners, former Chairman of the National Medical Relations Committee and former Secretary of the American Association of Hospital Chiropodists. While in the U. S. Army from 1942 through 1945, Dr. Tarara served overseas with the 35th Field Hospital in Africa and Italy. Dr. Tarara and his wife, Mary Elizabeth, live at 224 Sixteenth Avenue, Southwest, in Rochester, with their five children, Elizabeth, Barbara, James, Steven and David.

William B. Ignatoff
Newark, N. J.

Dr. William B. Ignatoff of Newark, New Jersey, passed away on June 24, 1959. Dr. Ignatoff graduated cum laude from Illinois College of Chiropody in 1934. He was a Past-President of the Chiropody Society of the State of New Jersey, consultant in mycology to the Skin Clinic of the Newark Department of Health and co-chairman of the Scientific Committee of the Region III Convention.

Dr. Ignatoff served on the Professional Relations Committee of the New Jersey Society which was responsible for the publication of the New Jersey Chiropodical Formulary. He was also a contributor to the 12th edition of the National Formulary. He was the recipient of the Mennen Award for research in 1953 and the Speidel Award in 1958.

Dr. Ignatoff has appeared as guest lecturer on many Regional Conventions, and contributed many articles to chiropodical literature. At the time of his death he was Vice President of the American Board of Chiropodical Dermatology.

He is survived by his wife, Gussie, and two children, Jeffrey and Ellen.

NEWS OF THE PROFESSION IN GREAT BRITAIN

FRANKLIN CHARLESWORTH, F.Ch.S.
Manchester, England

This is the first of a regular series of "letters" about the profession in Great Britain, by Mr. Charlesworth, Editor of the British Chiropody Journal.

SHORTAGE OF CHIROPODISTS

The introduction of a limited Chiropody Service, confined to old age pensioners and the physically handicapped has brought out a fact that has been in the forefront of the minds of all thinking chiropodists in Britain, that any form of Chiropody Service on a national scale would reveal an acute shortage of qualified practitioners.

Unlike the United States of America, persons can engage in the practice of chiropody without let or hindrance, irrespective of whether they have had an adequate training or not. The result of this is that only a modest proportion of persons practicing have taken a course of training and a qualification of the standard required by the Ministry of Health or are members of the two Societies recognized by the Ministry.

The Society of Chiropodists, whose schools were approved and taken over by the Minister of Health, has a membership of four thousand, while the Institute of Chiropodists, the other recognized body, have in the region of some two thousand members, making in all approximately six thousand chiropodists who would be placed on the State Register should the Minister of Health ultimately implement it.

The Minister has decreed, pending the State Register, that only those chiropodists who have done not less than a two-year course at one of the approved schools shall be eligible for an appointment in a hospital. This means that not more than two-thirds of the membership of the society are eligible. This decree was also an affront to those who had pioneered the profession and founded and developed the very schools he had recognized. Now the Minister of Health is about to launch a restricted service for the old age pensioners and the physically handicapped without consulting the profession who are to staff it and without implementing the State Register. This has created a farcical situation.

The real cause of the delay is undoubtedly the obstruction caused by the British Medical Association Joint Consultants Committee. It has been said that the Minister should have disregarded this opposition and proceeded with implementing the scheme, but this was impossible as it could not function without the cooperation of the medical profession.

Whilst one can sympathize with the Minister in his dilemma on the matter of the State Register, one cannot see what his object was in endeavoring to institute a service without the staff or the good will of the profession who were in the end going to treat the patients. Even if the whole six thousand practitioners were available, a shortage would still exist, but with it limited to his special list of some two thousand five hundred, the situation becomes pathetic.

To place the matter in the hands of the local authorities was not the wisest thing to do, even if it found him an easy way out. Even here we find a lack of reasonable common sense being shown by the local officials in many cases.

It must be realized that many chiropodists have successful and busy practices which they are not inclined to neglect. A three-hour session at a Municipal Clinic will mean a whole half-day gone counting traveling time, for which there is no pay-

ment. Many practitioners would be willing to arrange for the pensioners to attend their private surgeries at times mutually convenient as this would not disorganize the chiropodist's private practice. It would also be more convenient for the patient than sitting hours in the uncomfortable waiting room of a Municipal Clinic.

The cost of treating a patient under the National Health Service has been worked out on the basis of the sessional rate of one dollar per patient plus dressings which brings it up to one dollar and ten cents. Equipping and maintaining clinics is expensive and difficult. In view of the cost, it is quite possible to arrange for treatment by the chiropodist in his own surgery at a fee per patient that would bear very favorable comparison with the present cost of clinical treatment under conditions that would be infinitely more convenient and comfortable for both patient and practitioner, and at the same time go a long way towards solving the shortage of chiropodists.

The chiropodists are only too anxious to provide a service for the aged but the real obstacle is the overbearing uncompromising attitude by officialdom towards the profession who are to provide the service.

PODIATRY-CHIROPODY ABSTRACTS

JEROME SHAPIRO, Pod.D.
5429 Connecticut Ave., N.W.
Washington, D. C.

Editors of Local, State and Regional Publications are requested to provide copies to Dr. Shapiro who is editing this section of the Journal.

ONE EVENING A MONTH

Robert Lawrence, N.Y.S. Journal of Podiatry, 20:15, August 1959.

The author suggests skimming through the table of contents of the following important medical periodicals which are available at most medical libraries:

Acta Dermato-Veneralogica, a Scandinavian journal with emphasis on contact dermatitis and fungus infections.

Acta Orthopedica Scandinavia—frequent brief articles and case reports on the foot.

Archives of Physical Medicine—new techniques.

British Journal of Dermatology — frequent articles on foot manifestations of various systemic diseases.

Journal of Bone and Joint Surgery—many articles on diagnosis and treatment of food disorders.

Journal of Investigative Dermatology—mycological research is a common topic of discussion.

Lawrence feels that monthly perusal of the above tables of contents will take just an hour's time and will enable the podiatrist to keep well-informed in both podiatry and general medicine.

THE MANAGEMENT OF EXCESSIVELY DRY SKIN

Harry Sturtz, Indiana State Podiatry Journal, Vol. 24, August-Sept., 1959.

In treating excessively dry skin three points should be taken into consideration. "Feed the skin by internal means, support the skin by external application and refrain from defatting the skin." Vitamin A 100,000 units daily for two weeks and then 50,000 units daily thereafter for a month, with a week of no medication followed by another month's course has been used in the "skin feeding." At the same time the skin is supported by external applications through the use of such products as lanolin, cold cream, "hydro-dispersant emollients"

or lipoidal baths. Finally, it is important to refrain from defatting the skin through the use of soap washings. The author mentions an "anti-dry soap" which may be used.

FOCAL INVADER

Sam D. Zebrack, The New England Journal of Podiatry, 38:5, May 1959. (Reprinted from Canadian Podiatry Journal)

Following normal surgical routine for correction of ingrown toe nails of both great toes with an uneventful healing, the patient returned two months after discharge with severe inflammation of both great toes. The areas were treated locally and the inflammation completely subsided. One month later the patient presented herself with the complaint of the pain again in both toes. Examination revealed another flareup with a purulent discharge from the left toe. Following antibiotic therapy both toes became asymptomatic. At this point the patient made mention of the fact that with the use of the antibiotics, her teeth felt better, too. It was then ascertained that the patient's teeth had been bothering her all during the several phases of the flareups. Examination by a dentist revealed a serious pyorrhea of the lower teeth. Following treatment for the dental condition the toes returned to normal and have not required further treatment.

FIBROSITIS

Harvey J. Saff, Pod. D., Chiropody Review, 20:8, August 1959.

Fibrositis is best defined as "an idiopathic disorder of the soft tissues, chiefly characterized by pain and tenderness which may be local, widespread or referred, and is often associated with muscle spasm." The etiological theories mentioned and discussed include chilling of the skin, chronic strain due to postural irregularities, fatigue, focus of infection, disturbance of muscle nutrition, pathological herniation of fat lobules through a gap in the fascia and abnormal metabolism of Vitamin E. The clinical manifestations include those of subjective pain of a dull, aching variety remissive in character and relieved by relaxation of the part, paresthesias of the fingers and toes, disturbance of function of muscle groups and pain on palpation of a myalgic spot. This latter is defined as an area at the origin or insertion, along the edge or course of a muscle, which is "harder" to the touch than the surrounding parts and is painful to direct pressure. Plantar fasciitis is an important podiatric form of fibrositis and is often overlooked. The diagnosis is difficult to make at times and the disease process must be differentiated from rheumatoid arthritis and psychogenic rheumatism.

INTRA-ARTERIAL OXYGEN IN THE MANAGEMENT OF ISCHEMIC GANGRENE IN THE ELDERLY

D. J. Martin, M.B., B.S., (Lond.), F.R.C.S. (Ed.), The Chiropodist, 14:16, June 1959.

The large number of peripheral vasodilators available today is evidence of the consideration this subject has evoked. The administration of these drugs by mouth is almost valueless, for the part of the body most in need of them will obtain the least amount due to the diminished circulation. Intra-arterial administration has been more effective, but the results have not been good enough in the elderly patient with peripheral vascular disease. In search of a technique to revitalize ischemic areas the author has come upon a method of intra-arterial administration of oxygen gas. Dilatation may last anywhere from about a half-hour to about 48 hours. Amounts of 60-80 cc. are introduced at each insufflation and a course of 8 to 12 injections are given bi-weekly.

Objective measurements used to show increased circulation consist of:

1) Improvement in circulation, demonstrated by oscillographic and skin test measurements.

2) Ability to walk longer distances without claudication.

3) Less rest pain at night.

4) Patient's report of subjective improvement.

5) Pulses palpable that were not formerly.

6) Improved color.

7) Increased rate of healing of gangrenous tissue.

To date no evidence of thrombosis has occurred. These beneficial results pass off in about six months and patients are instructed to report back for another series of insufflations.

BOOK REVIEW

THE CARE OF THE GERIATRIC PATIENT

E. V. Cowdry, Ph.D., Sc.D. (Hon.), Director of Wernse Cancer Research Laboratory, Washington University School of Medicine; formerly President of the Gerontological Society and of the Second International Gerontological Society and of the Second International Gerontological Congress; Chairman of the Medical and Scientific Committee, American Society for the Aged, Inc., 417 pages, The C. V. Mosby Company, 1958.

This text is well written and easily read. There are 19 chapters. The podiatry profession has been acknowledged several times in the text. The references to our profession clearly indicate that there is a great deal of work for us to do insofar as our contribution to the specific welfare of the aged. Podiatry is "weakly" making its contribution in this most important phase of medicine.

The chapters which are so worthwhile for the foot specialist include Chapter I which discusses the musculoskeletal disease of the aged. It is pointed out in this chapter that there is an irregularity of weight bearing, particularly the motion of the joints, as a result of poor posture and muscular insufficiency, which may aggravate hypertrophic osteoarthritis. Good balance will especially improve the emotional and mental spirit of independence amongst the aged. This is our responsibility.

Chapter V was especially interesting to the reviewer. This chapter is devoted to the Surgical Aspects of the geriatric patient. In this chapter it was pointed out that the need for elective surgery should not be denied a patient on the basis of age alone; age may make such surgery even more imperative to avoid an acute condition which would necessitate surgery with its much greater mortality.

Chapter VI covers anesthesia for the aged in good practical manner. It gives recommended pre-operative and post-operative medications and their dosages. In the subchapter on local infiltration, adequate premedication for hypnosis and analgesia was recommended as a must. Local infiltration is the method of choice in the older patient.

The greatest objection to local infiltration without supplemental anesthesia is that the aged become quite restless after a short time.

Chapter VII discusses recommended drugs for the geriatric.

In summary, this book should be on the shelves of the practitioner of the foot. It emphasizes all that most of us believe in—the role of the podiatrist in the rehabilitation of the aged patient.

S.M.

TAX CLINIC

HENRY KENT, C.P.A.
New York, N. Y.

Mr. Kent will conduct a regular column on tax problems for the podiatrist-chiropodist. Your questions may provide the basis for future columns.

DEDUCTIBILITY OF ENTERTAINMENT EXPENSES

One of the most disputed areas of tax deduction is the so-called entertainment expenses for professional men. It is, of course, a well-known fact that commercial enterprises are permitted to deduct from their gross income the reasonable cost of entertaining their customers. But, what about the professional man? The tax authorities, the various state regulatory bodies have in the past frowned upon entertainment expenses incurred by doctors, podiatrists and other professional taxpayers. Yet, such expenses are very often of a nature which is both "ordinary and necessary" to the taxpayers professional income. It is, therefore, of considerable interest to the profession that a Special Ruling was issued by a District Director on the deductibility of entertainment expenses by members of the medical profession. What may in the past have been a question fraught with ethical considerations is viewed now as a practical business proposition. If doctors can prove adequately that entertainment expenses are ordinary and necessary, and clearly related to the production of income, the expenses are deductible. Although the ruling specifically mentions only medical doctors, its application to the other healing professions can reasonably be assumed.

Here are some of the requirements which must be met in order to claim a deduction, as set out by a District Director, but which doubtless expresses a national policy:

1. The amount of the deduction must be proven and its reasonableness determined. Once the amount is established, the expense is generally limited to the entertainment of other doctors from whom the expectation of patient referrals is reasonable. In other words, if the doctor is able to show that the entertainment had a direct relationship to the conduct of his practice and can show the business benefit reasonably to be expected from the expenditure, he may claim the deduction on his Federal income tax return. The general statement that he hoped or expected to get referrals or patients as a result of the entertainment is not enough. If personal reasons predominate, the expenditure may not be deducted, even though there is some possibility of a business benefit. Except in the case of industrial physicians, entertainment of individuals who are not doctors will not ordinarily qualify because the possibility of benefits to be expected are so remote as to be negligible. In instances of the entertainment of patients, the same general rules apply as in the entertainment of other doctors, and the clear relationship of the expenditure to the reasonably expected income must be shown.

2. The doctor claiming the entertainment expense must, in fact, have a practice consisting in part of referred cases.

3. It must be customary in the particular locality for members of the profession to incur entertainment expenses.

4. The specific purpose of the entertainment must be to promote the referral of patients.

The ruling also expressed a warning that repeated entertainment of the same doctor may indicate a personal motive and make such an expense non-deductible.

As with all other claimed expenses on the Federal income tax return, the burden

of proof rests upon the taxpayer. No clear-cut rules can be prescribed for proving entertainment expenses and their relationship to income as each individual case depends on the surrounding facts. However, proof of payments, i.e. cancelled checks to restaurants, night clubs, etc., charge accounts, bills, etc., along with complete notes in a diary or notebook indicating dates, persons entertained and the names of patients referred by the entertained doctor, along with the gross income received from such cases, will certainly be very helpful in establishing the claimed deduction, if called upon by the Internal Revenue Service.

PHARMACEUTICAL PREPARATIONS FOR THE PROFESSION

HARRY L. HOFFMAN, Ph.G., D.S.C.
Chairman, Council on Podiatry Therapeutics and Pharmacy

A column devoted to preparations, new and old, with emphasis on their value and uses in everyday chiropody practice. This is a regular monthly column prepared from information furnished by the pharmaceutical house. We invite questions, which we shall endeavor to answer, or obtain the answer.

Aerosol Spray Powder

Composition: Hexachlorophene with Silicones, lanolin, Undecylinic acid and sodium propionate.

Action and Uses: Cooling and soothing antiseptic and fungistatic foot powder for prevention and relief of Tinea Pedis (athlete's foot). Cooling and soothing for hot and tired aching feet.

Directions: Spray on affected areas of feet or on feet as a whole, night and morning. Thorough applications between toes, over feet and spraying into shoes is recommended to assure maximum effectiveness. Use daily to keep feet dry and comfortable. Pleasantly fragrant.

Supply: Aerosol spray packages, 6 ounce cans. By Podiatry Laboratories, 315 West 36th Street, New York 18, N. Y. Available at drug stores.

Phyatromine®-H

Description: Each cc. contains: Physostigmine Salicylate 0.6 mg. l-Hyoscyamine Hydrobromide 0.3 mg.

Indications: Industrial injuries, rheumatoid arthritis, spondylitis, fibrositis, bursitis, myositis, sprains and strains, black widow spider bite.

Action: Relieves crippling skeletal muscle spasm without affecting smooth muscle. Affords greater range of motion with greatly reduced pain.

Dosage: Arthritis and allied disorders: 1 cc. given 3 times a week. Maintenance, 1 cc. weekly. Muscular injuries, 1 cc. daily for 2 or 3 days. Black widow spider bite, 2 cc. given as soon as possible.

Supply: 1 cc. amps, box of 25: 30 cc. multiple dose vials. By Kremers-Urban Company, Milwaukee, Wisconsin.

Salimeph-C

Indications: May be used for maintenance between injections of Phyatromine®-H. Also for rheumatoid arthritis, myositis, bursitis, low back pain and sprains and strains of muscles and joints.

Action: Acts at the cerebral level to relieve the pain that causes spasm and at the spinal level to relax the spasm that causes pain.

Dosage: 2 tablets 3 times a day after meals or with milk.

Supply: Bottles of 100, 500 and 1000 tablets. By Kremers-Urban Company, Milwaukee, Wisconsin.

Description: Each tablet contains: Salicylamide, 250 mg.; Mephenesin, 250 mg.; Ascorbic Acid, 15 mg.

DIGESTS FROM THE LITERATURE

Anyone wishing to read the complete article, if not available in your local library, may borrow it through interlibrary loan. A microfilm may be borrowed from the National Medical Library, Washington 25, D. C., or a photo-duplication may be obtained from that library.

ARTHRITIS

New dietary regimen for arthritis; value of cod liver oil on a fasting stomach, Brusch, C. A., and Johnson, E. T., *J. Nat. M.A.* vol. 51, page 266, (July), 1959.

A special dietary regimen which restricts water intake and administers cod liver oil on a fasting stomach produced major clinical and hematological improvement in arthritis and rheumatism at the Brusch Medical Center, in Cambridge, Mass. Restriction of all water intake to a single portion taken one hour before breakfast is an integral part of the treatment.

In a series of 98 patients who continued the regimen for six months, 92 (93%) obtained marked relief and 89 (90%) showed favorable changes in blood chemistry. The blood sedimentation rates dropped consistently from averages of 20 to 30 (Wintrobe) to normals of 0 to 12 within eight to eighteen weeks. These findings provide an objective confirmation of the clinically observed reduction of the inflammatory process.

Intravascular agglutination with blood sludging is consistently found in arthritis. A comparison of the normal and arthritic patterns in the present study indicated that sludged blood resulting from positive intravascular agglutination may be an etiological factor. Cod liver oil taken on a fasting stomach was found to reduce blood sludging and also helped relieve the symptoms of arthritis.

The blood chemical changes and clinical results suggest that adherence to the prescribed regimen on a long-term basis may produce sustained improvement in arthritis.

MUSCULOSKELETAL SYSTEM

Care of the Feet of Children, G. Vyaghreswardu. Indian J. Pediatrics 25: 408-12, 1958.

Among 1,428 children below 12 years of age, seen in the past three years at this hospital in India, 247 had foot deformities; of these 30 had congenital talipes equino varus. Numerous causes of this disorder have been suggested: defect in the germ; spasmodic muscular disorder; arrest of development; mechanical disfunction, and mechanical pressure. Brockman's theory seems most reasonable, that the cause of foot deformities is intrinsic and is independent of outside influences—"a congenital subluxation of the head of the talus out of its socket, with shortening of the muscles which control the socket."

The object of treatment is to remedy mechanical faults which exist, so that the talus may be placed in its normal relationship with other tarsal bones. The method of choice is repeated manipulations, combined with some form of fixation between treatments. Manipulations stretch the contracted soft parts and restore the bones of the tarsus to normal position. They are done by a trained person, and are continued until walking begins. Adduction, inversion, and plantar flexion are corrected, in that order. In cases of severe deformity, manipulation must be done guardedly—not to full correction at the first treatment, because of possible vascular disturbances.

Parents in this area cannot afford to keep their children in the hospital for a course of treatments. The method used is as follows: Under general anesthesia, manipulation is done manually, or if the child is

over five years old, by means of a Thomas wrench. When corrected, the foot is held in the position of greatest protection possible and placed in a plaster cast, beginning at the inner aspect up to above the knee. Parents are told to return with the child in one month, and the procedure is repeated until the deformity is corrected (in 1 to 6 months; averaging 3). When necessary, division of the tendo Achillis is performed to correct a true equinus deformity at the ankle joint. This is done subcutaneously, usually at the time of the last manipulation. A plaster of Paris cast is applied after tenotomy, which was performed in 10 of the patients. Parents are told the child should wear shoes and should report every 3 to 6 months for check-up, until they are walking.

Relapses occasionally occur. Adduction of the foot causes stretching of the ligaments and not enough force is exerted upon the bone whose position must be altered. Open operations have been performed for this reason. In uncorrected cases of patients aged 20, triple arthrodesis has been successfully performed. The 30 children treated were aged from 11 days to 20 years. The number of manipulations required were from 1 to 5 (average was 4); in 4 patients there was a slight metatarsus varus deformity at the end of correction. Results were good in 18, fair in 7, not good in 2; 3 patients did not return for check-up.

Twelve patients had an acquired talipes equinus, 9 following poliomyelitis; 3 had contracture of the calf muscles following an abscess in that area. The surgical procedures used were: tendon lengthening in 8, triple arthrodesis in 2, transplantation of the tibialis anterior into the peroneus brevis in 1; a stabilization operation was advised in the remaining patient. Walking calipers were necessary in one post-poliomyelitis patient. The results in all were highly satisfactory.

NEW GROWTHS

Treatment of Plantar Warts with Radiation, A. E. Levy. West Virginia M. J. 54: 474-75, 1958.

Etiologic factors in cases of plantar warts may be inflammation, constant trauma, autoinoculability, and sometimes mild contagion. Its cause is often charged to wearing of high heels because it occurs in three females to two males. Many cases occur in young adults and teenagers. The plantar wart is found most frequently in pressure areas, causing pain and swelling which make walking difficult. In approximately 50 per cent of patients it occurs singly, but there is a tendency to multiple formation in young patients. When the horny covering is removed, a rather soft, moist, papillary growth, seedy in appearance, will be found.

The current treatment methods include chemocautery, electrodessication, injections, surgical excision, and radiation. In chemocautery the agents used may be formalin 5 to 20 per cent strength, with repeated applications, phenol, nitric acid, and salicylic acid paste 30 per cent, etc. This method is helpful in cases of multiple warts, not exceeding 3 to 4 warts. A wart larger than 1.5 cm. in diameter may require dividing the area into smaller ones. Treatment is given six to eight times at 2-week intervals. Results are only fair and painful scars may follow treatment. Slow healing and painful scarring makes electrodessication difficult on pressure points. Injection therapy if helpful is usually psychotherapeutic. Surgical treatment requires full thickness excision. Usually this method is inadvisable because rarely successful, and it leaves painful scars.

Radiation therapy has brought encouraging results. This is preceded by the use of warm foot soaks three times daily; then the lesion is surrounded by a collar of emery board and the callus gently filed after each foot bath. The warm soaks re-

duce inflammation and make the callosity easier to remove. Lesions not more than 15 mm. in diameter are treated. A lead cutout, conforming to the outline of the wart, but 1 mm. larger in diameter, is prepared. A beryllium window tube is used which has a minimum of inherent filtration. With 0.5 mm. of al added filtration, the HVL is approximately 0.8 mm. of al at 100 KV. A table is given of dosage for a beryllium window tube, using 100KV with 0.5 mm. of al added filtration, and HVL of 0.8 mm. of al. Another table gives dosage prepared for 100KL with HVL of 0.4 mm. al. After radiation therapy the patient is told to continue the warm foot baths once daily, and to prevent accumulation of callus by gentle filing. After 14 to 17 days of treatment, the wart is completely curetted, and a small dressing applied for one day. A second curetting has been required after 1 to 2 weeks in only a few cases.

In a follow-up one or two years after operation, results were found very satisfactory in 47 of the 49 patients treated. Improvement of 100 per cent cannot be expected. No severe complication or secondary infection occurred in any case. The lesion recurred in two patients; one of which was asymptomatic.

Neuroma of the Plantar Digital Nerve: A New Method of Treatment, L. Cozen. Clin. Orthopaed. No. 11, 224-26, Spring 1958.

Metatarsalgia produced by a neuroma of the plantar digital nerve is a common complaint. The symptoms are lancinating pain in the forefoot, radiating into the toes, or even through the leg. A point of tenderness can be elicited in the web between the toes, usually the third and fourth, but sometimes between the fourth and fifth, or the second and third. A diagnostic aid is a painful click elicited when the metatarsal heads are pressed together. This click has proved to be of no significance unless pain is also elicited. If painful, the neuroma probably has been squeezed between the metatarsal heads.

Redistribution of pressure over the metatarsal area by use of a metatarsal bar attached to the sole of the shoe behind the metatarsal heads, or by a metatarsal pad inside the shoe back of the metatarsal heads, or metatarsal exercises, may be helpful. Otherwise, excision of the neuroma through either a plantar or dorsal incision is the usual treatment. Before deciding on surgery, the author tries injection of hydrocortisome 0.5 cc. into the region of the neuroma, between the metatarsal heads. Acceptable relief has been attained in 12 of 17 patients. The number of injections for each patient varied from 1 to 7, usually given at weekly intervals. Metatarsal bars were ordered for two of these patients, but no auxiliary method was used in the other cases.

It is suggested that this method be added to the conservative program of therapy before surgery is considered.

ONYCHOLOGY

Diseases of the Nails: 792 Cases; Clinical and Microscopic Findings, with Resume of Newer Therapeutic Methods, C. J. White, and T. C. Laipply. Indust. Med. & Surg. 27: 325-27, 1958.

The nails may be affected by congenital malformations, systemic diseases, trauma, and growths, but these are readily distinguished. Dermatologic conditions produced by infectious skin diseases, by allergic sensitivities or through contact with irritants, may require histopathologic study. Such a study of 792 cases is reported.

The most common of the infections is *ringworm* (onychomycosis), a fungous infection which destroys the nail and provides a focus for fungi which invade the glabous skin, to cause the increasingly prev-

alent "athlete's foot." Ringworm is caused by three types of organisms: (1) the Trichophytons, the hypomycetic group; (2) Monilia, a yeast-like organism, and, rarely (4) the Favus organism. Usually, the infection begins with scaling of the free extremity of the nailplate or one of the folds, and sometimes proceeding to total destruction of the nail. One or more nails become involved, with the distal portions becoming powdery, followed by destruction, or in some cases, the nail separates from its bed without previous disintegration. There is no pain, except in the monilial type.

Diagnosis of ringworm should be confirmed by microscopic study, since cultural findings are positive in only one-third of cases. Laboratory confirmation may be obtained by use of the leukofuchin technic (Schiff's reaction). Biologic tests are of no value. The roentgen ray in fractional doses is helpful in treatment of the superficial, invasive type. The Grenz ray is of value in the monilial and other yeast-like types; liquid antifungicidal preparations are almost specific. Local preparations are of little aid in the deep, invasive type of fungous infections; surgical removal of the nails is often indicated. The authors found surgical avulsion unsuccessful but feel that Kligman's new surgical technic may be helpful. Livingood's green antifungal agent is of value in some cases.

Bacterial infections of the nails are recognized histologically by the presence of gram-positive cocci, as in staphylococcus onychitis. In three cases primary staphylococcus onychitis was believed to be a definite entity, but in general the presence of bacteria indicates secondary invasion.

Psoriasis of the nails may occur without involvement of the glabrous skin in rare cases only. The nails may attain a chalky-white appearance due to subungual deposits, in the commonest form. Less common are the lesions with small, thimble-like depressions, which seem quite diagnostic of psoriasis involvement. Psoriasis being a systemic disease, when the disease progresses into the erythrodermic stage, the fingers are attacked, and superficial destruction may occur on the nail's undersurface along the sides as well as under the nail. The microscopic picture may resemble ringworm, but no fungi are present, either in nail-plate or in subungual keratin. Treatment is unsatisfactory.

Contact dermatitis producing changes in the nails may be due to sensitivity to irritants, such as detergents and all types of cosmetic nail preparations. The incidence of these cases is rapidly increasing. The changes observed are brittleness, fissures, and hyperkeratotic changes. Oil, tar and grease may cause deep discoloration. Bacterial infection may occur secondarily, and require treatment of the infectious element.

Eczema (atopic dermatitis) due to an underlying allergic condition causes corrugations of the nail which may disappear with the appearance of the new nail, if the allergic condition is found and treated. Beginning as a depressed area near the root of the nail, the dyscrasia may lead to deep discoloration, brittleness and multiple splitting.

Other conditions affecting the nails include *hypovitaminosis* causing the nail to have transverse depressions with longitudinal striations. Foods and medications containing vitamins A and D especially are curative. *Growths* may occur around the nails: *warts*, the most common, should be treated conservatively to prevent nail deformities; a preparation containing powdered euphorium may be helpful; also oral administration of bismuth; only occasionally is surgery necessary. *Angioma*, melanoma, keratoses and some malignancies are rather frequently seen; they are diagnosed histologically and treated like tumors elsewhere on the body. *Systemic dis-*

eases affecting the nails include arthritis, peripheral vascular disease, telangiectasia, and anemia.

A new method of treatment, specific for nail diseases, is mentioned without details—a penetrating base consisting of glycols, amino acids, and fatty acids.

RHEUMATISM; ARTHRITIS

Rheumatoid Arthritis of the Feet, L. M. Lockie and H. M. Robins. J. Med. Soc. New Jersey 55: 656-61, 1958.

Arthritis of the feet is of three types: gout, osteoarthritis, and rheumatoid arthritis.

Gouty arthritis occurs repeatedly in sudden attacks of severe, throbbing pain in a joint—not always the same joint—with swelling and discoloration, and lasting from 5 days to 2 weeks. The diagnosis may be confused by a history of trauma which precipitated the attack. Gout occurs most often in the metatarsophalangeal joint, but any joint, including the ankle, may be involved. When the metatarsophalangeal joint is affected, the acute pain is on the lateral aspect of the joint, not on the top or bottom.

Osteoarthritis may involve the metatarsal joint of the great toe first, and eventually cause hallux rigidus. The joint action is obstructed by overgrowth of bone or exostosis. There is no swelling or discoloration, except after long walking or standing. It may occur in other joints of the foot, but in mild form.

Rheumatoid arthritis is a manifestation of systemic disease. Patients should have a thorough general examination, with laboratory studies. Radiologic studies are helpful. The authors' therapeutic plans requires complete bed rest for three weeks of intensive treatment and education, followed by weekly visits for several months at the office or at home, followed then by several months of less frequent visits. During the 3-week rest period, no weight bearing is allowed until all pain and swelling have subsided, and joints are moved without difficulty. In bed the foot is kept at right angles to the legs by a footrest or a well-padded foot board at the end of the bed. Pillows between the foot board and the patient's foot helps to prevent flattening of the foot. Sandbags may be used, or pillows, alongside the foot to prevent external rotation. If necessary a light cast is used, coming well up over the ankle of each foot; it is bivalved, the posterior part serving as a splint. It is removed three times daily by the patient, and then ankles and toes put actively through full range of motion. If the knees are involved, a pillow should not be placed under them. Passive exercises should not be used in acute arthridites of the foot. Massage and exercising of the legs are necessary to maintain muscular tone while in bed. When acute pain and inflammation subside, the patient is allowed out of bed; he wears shoes with firm soles and fairly stiff counters; no slippers.

Medical Therapy

Salicylates are the mainstay of arthritic therapy. They help to reduce muscle stiffness.

Analgesics are helpful, except codein which causes irritability and constipation. Phenylbutazone is the most helpful analgesic and has much better anti-rheumatic effect than the salicylates. Side effects include sodium chloride retention, rash, activation of peptic ulcers, bone marrow depression with agranulocytosis and thrombocytopenia, if given in large doses for prolonged periods. Occasionally toxicity follows small doses, Phenylbutazone is helpful to those not relieved by the salicylates. A dose of 100 to 300 mg. daily usually causes no reaction, but patients should be carefully watched.

Gold salts are effectively used today to stop progression of the arthritis. A recent study was made of 1,093 patients with a carefully supervised program of treatment

at weekly intervals for a minimum of 3 months to many years. Gold sodium thiomalate (Myochrysine®[1]) routinely and aurothioglucose (Solganal®[2]) occasionally substituted were received by 369 patients, at least 300 mm. during therapy. Of these 57 per cent showed major improvement; only 7 per cent had no improvement. The solution was injected into the deltoid area once weekly; the first week, 10 mm.; the second week, 20 mm.; the third week, 30 mm.; the fourth week, 40 mm., which dose was continued weekly until 500 to 750 mm. had been received. The case was then re-evaluated. The dose was reduced gradually, until 10 to 20 mm. were being given at monthly intervals for an indefinite period, if no toxic reactions occurred. Treatment stopped when symptoms ceased. Urinalysis and blood counts are required at regular intervals. Toxic symptoms include glossitis, burning tongue and a metallic taste. Occasionally thrombocytopenia and agranulocytosis occur and even less commonly, albuminuria. Fifty per cent of those having side effects were able to resume gold therapy after 6 to 8 weeks if administered in small doses. Contraindications include systemic lupus erythematosis, nephritis, blood dyscrasia, and a tendency to hemorrhage. If blood counts show decreased platelets or the granular series of white blood cells affected after the first or second dose, treatment should be stopped and not resumed. The closer to a toxic reaction, however mild, the more marked the improvement. Gold salts are important in treatment of arthritis of the feet.

Steroids relieve symptoms markedly, but temporarily, but do not correct the underlying progression of the disease. Their use is indicated (1) when the clinical status discourages patient and physician. Steriods are given in as small a dose as will bring relief, but not given for more than 2 weeks at one time. (2) Patients, especially juveniles, with short-term exacerbations may be given a cortocosteroid during the course of a flare-up, and discontinued with improvement. (3) To patients with severe constitutional symptoms (tachycardia, perocarditis, high fever), steriods may be lifesaving. (4) During rehabilitation of patients with severe involvement, use of steroids may be necessary for months to accompany selected objectives in rehabilitation.

Cortisone in large doses may cause Cushing's syndrome. Sodium retention is less common with prednisone and prednisolone than with cortisone and ACTH. Increased blood pressure and hyperglycemia may occur. An underlying osteoporosis becomes worse under long therapy. Steriods are contraindicated in psychoses and severe psychoneuroses, and in patients with chronic or acute infections. Intra-articular use of hydrocortisone or prednisolone may relieve patients with rheumatoid arthritis of the feet.

Vaccines are not generally approved by hematologists. They may be given to patients who do not tolerate gold. They are given a vaccine of killed hemolytic streptococci weekly in small amount of 4 million organisms subcutaneously.

Sedation is used during the hospital stay and during apprehensive states, and to insure a good night's rest. Pentobarbital or secobarbital are used in the hospital as needed, but not given after discharge. A patient may require sedation for a month or two, and may be given a barbiturate or a tranquilizer.

Iron may be required in treatment, as some degree of anemia usually parallels the severity of rheumatoid arthritis. Ferrous gluconate or ferrous sulfate 0.3 gm. is given three times a day between meals. Severe anemia requires a transfusion of 500 cc. of whole blood weekly for several weeks. This inhibits the arthritic process as well as corrects the anemia.

Diet plays no part in therapy except to be well balanced. Reduction of excess weight is important.

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ORGANIZATION NEWS

Secretaries of local, state, regional, affiliated, subsidiary and other related organizations are invited to submit copy for these columns.

DISTRICT OF COLUMBIA

The District of Columbia Podiatry Society's annual SIDNEY KATZOFF MEMORIAL LECTURE will be given this year by Dr. Leonard Hymes of New Jersey, at the Shoreham Hotel, Sunday, October 25, 1959, at 10:00 A.M.

GEORGIA

Dr. Ernest Godwin, President of the Georgia Podiatry Association, and Dr. William J. Meadors, President-Elect, have recently been commissioned as Lieutenant Colonels, Governor's Staff, Georgia National Guard, by Governor Ernest Vandiver of the State of Georgia.

MICHIGAN

The following committee chairmen were appointed for the 1959-60 fiscal year: Legislative, David Wright of Battle Creek; Executive Council, William Wagner of Midland; Blue Cross, Robert Willoughby of Ypsilanti; Vocational Guidance, Anthony Kloka, Jr., of Detroit; Special Events, George Budak of East Detroit; Membership, to be selected; Health Radiation, John Didham of Flint; Health Plans and Insurance, Sheldon Burgess of Detroit; Ethical Relations, Clifford Trethewey of Owosso; Scientific, Earl Kaplan of Detroit; By-Laws, Irvin Kanat of Garden City.

NEW HAMPSHIRE

At the annual meeting of the New Hampshire Podiatry Society, the following officers were elected: President, E. Paul Fachada of Keene; First Vice President, George A. Smith of Dover; Second Vice President, Phillip E. March of Nashua; Secretary-Treasurer, Tomy Levingston of Portsmouth. Guest speaker, Dr. Allan Whitney of Natick, Massachusetts, presented a lecture on Surgical Techniques in Podiatry. Dr. Clifford Coles, Professor of Biological Sciences at New England

Awards for Research Papers

The Wm. J. Stickel Annual Awards
for Research in Podiatry-Chiropody for 1960

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Journal of the American Podiatry Association
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Sixteenth Year of Awards

1st Award - $400.00 — 2nd Award - $250.00 — 3rd Award - $100.00
4th and 5th Awards - each $50.00

THE DREW AWARDS

For research on the practical application of shoes to foot problems.
1st Award - $200.00 — 2nd Award - $150.00 — 3rd Award - $100.00

Application forms, rules and regulations can be obtained from the Secretary. The final date on which papers will be accepted is May 1, 1960.

College of Pharmacy, and Mr. John Carr, world-wide traveler, presented slides of recent trip to Africa.

NEW MEXICO

At the semi-annual meeting of the New Mexico Podiatry Society held in Albuquerque, the following officers were elected: President, Dr. Miller Lane; First Vice President, Dr. Lenore Morris; Secretary-Treasurer, Dr. C. W. Boesenberg.

A review of the new Podiatry Statute was presented. The New Mexico Podiatry Statute was revised and passed into law in the 1959 legislature. A broader and more exact law is now in effect and the designations Podiatrist and Podiatry are official.

NEW YORK

The State Education Department has announced the appointment of Dr. Abel Gorfain to the Board of Podiatry Examiners. Dr. Gorfain, appointed for a full five-year term, will replace Dr. Albert Graf who was a member of the Board of Examiners from 1949-1959.

OHIO

The Ohio Chiropodists Association is planning a postgraduate course for December 5 and 6 at the Ohio College of Chiropody. The new Ohio Chiropody-Podiatry law requires that, for annual licensure, individual chiropodists must present satisfactory evidence that he has completed at least two days of the annual educational programs approved by the chiropodist serving on the Medical Board. This is the only officially authorized educational course approved by the Medical Liaison Committee. Following are lecturers and their topics: George Custer, D.S.C., Chicago, Illinois, "Medical Relaxation"; Earl Kaplan, D.S.C., Detroit, Michigan, "Podopediatrics"; Marvin Steinberg, D.S.C., New York, "Injections and Surgical Techniques"; Morton Polokoff, D.S.C., Paterson, New Jersey, "Orthodigita."

RHODE ISLAND

At the recent annual meeting of the Rhode Island Podiatry Society the follow-

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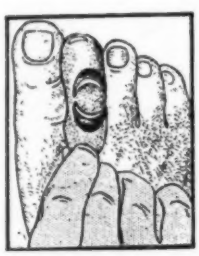

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ing officers were elected: President, Conrad C. Cloutier of Providence; President-Elect, J. T. McGauran of Westerly; Vice President, E. Hochman of Pawtucket; Secretary, A. J. O'Rourke and T. W. Burgess of Providence; Treasurer, Myron Keller of Providence; Delegate, J. McGauran and Alternate, A. J. O'Rourke.

AMERICAN COLLEGE OF FOOT SURGEONS

The American College of Foot Surgeons announces its First International Convention, to take place in Mexico City, January 9-14, 1960. Members of the American College of Foot Surgeons and the American Podiatry Association are cordially invited to attend. Dr. Lawrence Frost of Monroe, Michigan, is Convention Chairman.

FEDERATION OF CHIROPODY BOARDS

The Twenty-Fourth Annual Meeting of the Federation of Chiropody Boards was held August 29-30 in New York City. Lectures, discussions and panels regarding state board activities were conducted on the first day. The second day was devoted to annual business and the following officers were elected: President, Morris Haas of Albuquerque, New Mexico; President-Elect, Morris K. Upshaw of Jackson, Miss.; First Vice President, A. G. Kalin of Detroit, Mich.; Second Vice President, Ralph Orr of Erie, Pa.; Third Vice President, Ada Ruth Taylor, Fresno, Calif.; Secretary-Treasurer, L. A. Hansen of Kansas City, Mo.; Council on Education for term of three years, G. R. Tobin of Twin Falls, Idaho. Robert Stess of Perth Amboy, N. J., is retiring president.

NATIONAL BOARD OF CHIROPODY EXAMINERS

The Fourth Annual Meeting of the National Board of Chiropody Examiners was

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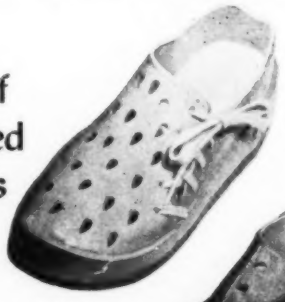
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held in New York on August 30. The National Board voted to have a target date for the first examination in the spring of 1962. The following officers were elected: President, Pearce Nelson of San Francisco, Calif.; President-Elect, Milton Gennis of Tulsa, Okla.; Vice President, Robert Stess of Perth Amboy, N. J.; Secretary-Treasurer, L. A. Hansen of Kansas City, Mo.; Executive Committee, Leroy Numbers of Chicago, Ill., and Edward Tarara of Rochester, Minn.

CALIFORNIA COLLEGE OF PODIATRY HOSPITAL FUND

The Podiatry Hospital in connection with the California College of Podiatry, is expected to be completed in early 1960. Cost of the hospital is $310,000 and one-third of this sum has already been acquired. The College is soliciting the alumni and all their friends for contributions.

The new hospital will accommodate 1000-2000 inpatient surgical cases yearly and approximately 20,000 outpatients through its clinical facilities. The new hospital will treat needy and underprivileged people in the area and students of the college and their families, as well as patients of the practitioners. Facilities of the hospital will also be available for postgraduate courses and work.

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THE THIRD PAN-AMERICAN GAMES
CHICAGO, ILLINOIS

Dr. Joseph Doller was a member of the Committee on the Third Pan-American Games Sports Medicine. This committee conducted a series of lectures on sports medicine and Dr. Doller was one of the participants. T. R. Van Dellen, M.D., was chairman of the committee.

L. C. Numbers, D.S.C., Director of Clinics, Illinois College of Chiropody, was official chiropodist to the athletes at the games. His letter, describing his participation in the games, follows:

"The officials of the 3rd Pan-American Games held in Chicago August 28—September 7, provided both medical and chiropodical care for all contestants. I was requested to provide as many chiropodists as would be needed for all track and field events held in Soldier Field. We felt that three in attendance at all times would be adequate and it proved to be so. I was ably assisted by Drs. William Readey and Donald Mahrle, both of the Clinical Staff at the Illinois College of Chiropody. We had dozens of volunteers from the Chicago area available if more help had been required.

Actually, with the exception of the marathon, very few required care. No serious accidents marred the Games. A twisted ankle occurred occasionally.

The marathon race (26 miles and 385 yards) provided us with some interesting information on what happens to feet during such an ordeal. Prior to the race we examined the feet and foot gear of the runners. Arch heights appeared to be average to low. Running shoes were of soft, light leather with rather thin rubber soles and low rubber heels. Some shoes had an elastic gore rather than a tongue and laced over the elastic. The Mexican

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boys used white deerskin shoes with elastic gores only—no laces. Their shoes had a more substantial rubber sole and heel than the other contestants. The entry from Chile used a foam rubber heel pad in his shoes. Several runners wore no sox at all and those who did wore only light ones.

Juan Silva of Chile used moleskin on the plantar surfaces of his feet and had the ends of his toes covered with adhesive tape. Doug Kyle of Canada ran with a plantar rest type of strap. Another runner simply circled his toes with one-inch adhesive. Jim Green of Massachusetts ran in a battered old pair of shoes with several holes in them. The holes had worn thru the shoes and were not cut out as it appeared. Green finished second in the race. Kelley, the winner, set a new marathon record of 2 hours, 27 minutes and 54.2 seconds. His shoes were well used before starting this race. It was quite obvious that Kelley and Green were in top physical condition.

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race got underway the first two casualties were brought in by ambulance. Kyle of Canada was a victim of exhaustion and Juan Villagran of Guatemala twisted a knee. Kyles feet were so sore that we could not remove the adhesive strappings. He planned to let them soak off later.

All runners were placed on cots, covered with blankets and allowed to rest. We removed shoes and sox as soon as we could. Most of the feet were quite swollen. The contrast in pathology was surprising. Some pairs of feet were absolutely free of any visible damage. Some had moderate blistering, some were bleeding slightly and one Mexican boy had enormous blood blisters at the first and fifth M. P. articulations, extensive ecchymosis throughout the entire plantar metatarsal area, and avulsion of three toenails. Spasm of the thigh and calf muscles occurred in several instances.

Statistically, these runners took about 30,000 paces during this race with an accumulated weight stress of over 4 million pounds on their feet. This is the approximate weight of a Navy destroyer — over 2,000 tons. Moses Dwarka of British Guiana almost accomplished this statistical feat on cement bare footed. He probably completed better than 20 miles when he gave up. "My feet felt like they were on fire," he stated. They appeared to be none the worse after the ordeal.

WOMEN'S AUXILIARY MESSAGE

As we begin a new year, we of the Auxiliary wish to pledge our enthusiasm, our energy, our loyalty and our efforts for the advancement of YOUR (our) profession. It is our desire that you will think of the Auxiliary as your public relations directors and that you will call upon us to aid the American Podiatry Association in any way we can.

At our recent annual meeting in New York City, we contributed to the Fund for the Advancement of Podiatry-Chiropody Education and the exhibit which is to be

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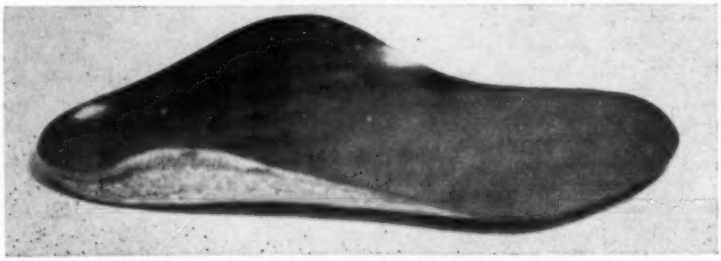

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placed in the Museum of Science and Industry in Chicago. We are most happy to have an excellent group of officers this coming year. They are: 1st V-Pres., Mrs. Fred Broun, Chicago, Ill.; 2nd V-Pres., Mrs. Bruce Wright, Battle Creek, Mich.; Secy-Treas., Mrs. J. E. Adams, St. Petersburg, Fla.

If your wife is not a member of the Auxiliary, we urge you to write today for literature regarding our organization.

MRS. CLEOTHA PARHAM, *President*

LEGAL AND LEGISLATIVE

ILLINOIS

The 1959 State Legislature passed a Radiation Control Act. Only physicians and licensed podiatrists-chiropodists may supervise the use of shoe fitting fluoroscopes, according to Dr. Roland R. Cross, State Health Director, who said, "X-rays are damaging to human beings and their use is justified only when a medical service can be justified."

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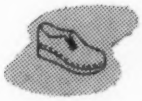

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CONVENTION DATES AND MEETING NOTICES

American Podiatry Association
Chicago, Ill., Aug. 27-30, 1960
Drake Hotel
Seward P. Nyman, Convention Manager
3301 16th St., N.W., Washington 10, D. C.
Michael I. O'Connor, Exhibit Manager
428 E. Preston St., Baltimore 2, Md.

Region One
(Conn., Maine, Mass., N. H., R. I., Vt.)
Dr. Edward H. Buchbinder
10 Allyn St., Hartford, Conn.

Region Two
(New York)
New York, N. Y., Feb. 19-21, 1960
Barbizon Plaza Hotel
Mr. Gilbert Hollander, Ex. Sec.
353 W. 57th St., New York, N. Y.

Region Three
(Del., Md., N. J., Pa.)
Philadelphia, Pa., May 5-8, 1960
Sheraton Hotel
Dr. B. C. Egerter, Gen. Chairman
507 Liberty Ave., Pittsburgh, Pa.

Region Four
(Ohio)
J. Edwin Farmer, Ex. Sec.
Fifty W. Broad St., Columbus, Ohio

Region Five
(Ill., Ind., Mich., Wis.)
Mid-West Conference
Chicago, Ill., Mar. 25-27, 1960
Morrison Hotel
Dr. Ralph M. Ticko, Pres.
536 W. Wisconsin Ave., Milwaukee, Wis.

Region Six
(Colo. Iowa, Kan., Minn., Mo., Nebr., N. Dak., S. Dak.)
Omaha, Neb., April 1-3, 1960
Sheraton-Fontenelle Hotel
Drs. Harold G. Wieseman and Ken C. Nielsen
640 City Natl. Bank Bldg., Omaha, Neb.

Region Seven
(Idaho, Mont., Oreg., Wash., Wyo.)

Region Eight
Drs. Harold G. Wieseman and Ken C. Nielsen,
Williamsburg, Va., Nov. 13-15, 1959
Williamsburg Inn
Dr. Leonard Kaplan
718 Court St., Portsmouth, Va.

Region Nine
(Florida)
Miami Beach, Fla., Oct. 29-31-Nov.1,1959
Roney Plaza Hotel
Dr. E. B. Hurd, Gen. Chairman
623 DuPont Blg., Miami, Fla.

Region Ten
(Ala., Ga., Ken., Miss., Tenn.)
Dr. Chester A. Nava
4140 Shelbyville Rd., Louisville, Ky.

Region Eleven
(Ark., La.. N. Mex., Okla., Texas)
Dr. W. C. Gigerich, Gen. Chairman
Arkansas Natl. Bank Bldg., Hot Springs, Ark.

Region Twelve
(Ariz., Cal., Nev., Utah)
Dr. Alfred G. Roos
209 Post St., #412, San Francisco 8, Calif.

Canadian Podiatry Association
Dr. L. Hurwitz, Exec. Sec.
3017 Bathurst St., Toronto, Ont.

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IN AUGUST 1960

IN CHICAGO, ILLINOIS

DEATHS REPORTED

Armand R. Brunelle
Manchester, N. H.

Dr. Armand R. Brunelle, 36, a well-known Manchester chiropodist and veteran of World War II, died recently after a short illness. Dr. Brunelle was a graduate of Assumption Academy, Worcester, Mass., St. Anselm College and the Chicago College of Chiropody and Pedic Surgery. He was an active member in the New Hampshire Podiatry Association and the American Podiatry Association.

Morris Sharff
Chicago, Ill.

Dr. Sharff died at Duke University Hospital in Durham, N. C., where he had been a patient for four months. He was an active member in the Illinois Chiropody Society and the American Podiatry Association.

Niles P. Gartner
Sterling, Ill.

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A.P.A. EXHIBITS AT A.H.A. MEETING

The American Hospital Association held one of its largest annual meetings at the Colosseum in New York the latter part of August. The American Podiatry Association displayed its medical hospital exhibit in the educational exhibit section. The exhibit was manned during the meetings by volunteers from New York State Podiatry Society and members from the neighboring New Jersey Chiropody Society.

Illustration shows Morton Block, Pod.D., Bronx, N. Y., talking to Dean F. Smiley, M.D., Director of the Commission for Accreditation of Foreign Medical Graduates.

Many hospital administrators and other hospital personnel evidenced much interest in the services chiropodists-podiatrists can render to the hospital and the people they serve.

The annual meeting of the American Hospital Association included an instructional conference on "The Hospital and the Allied Health Professions." Dr. A. Rubin, Secretary and Editor of the American Podiatry Association, was one of the five participants presenting a paper on "Podiatry Service in the Hospital Community."

MOOD ELEVATORS

The teacher had asked her Sunday School class who Saint Mark was. No one answering she asked about Matthew. Still no answer. "Surely," she said, "Someone knows who Peter was."

At this a shy little voice came from the back of the room. "Please, teacher, I fink he was a wabbit."

Podiatrist

Some will find the hot-dog stand will satisfy their hunger ample,
But a Podiatrist calms the pain of "dogs" upon which they trample.

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"There is one thing to be said about ignorance, it sure causes a lot of interesting arguments."

———

"One good thing about telling the truth is that you don't have to remember what you said."

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Five children sent this letter to the Seattle Post-Intelligencer: "Our dad says juvenile delinquency is the result of parents trying to train children without starting at the bottom."

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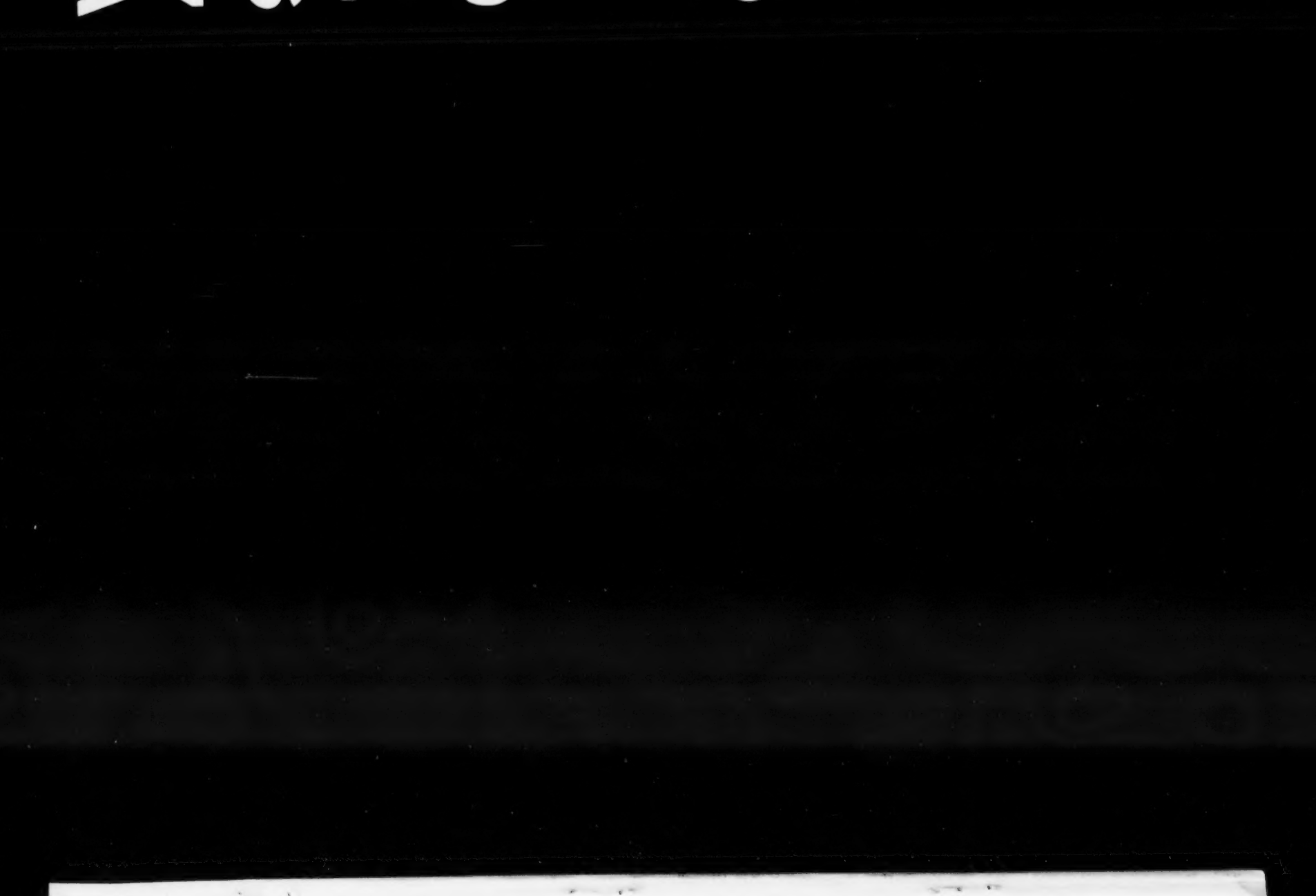
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